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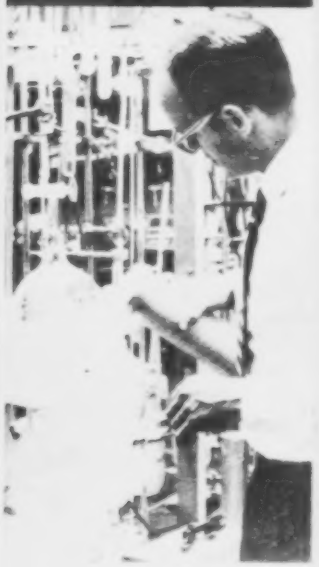
MINERAL REVENUES:

THE 1988 REPORT ON RECEIPTS FROM FEDERAL AND INDIAN LEASES



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MMS U.S. Department of the Interior
Minerals Management Service
Royalty Management Program

Cover Photographs:

Top, Outer Continental Shelf platform, Gulf of Mexico.
(Photo courtesy USGS.)

Center, Scientist in research laboratory.
(Photo courtesy USGS.)

Bottom, Power dragline at coal mine in Wyoming.
(Photo courtesy USGS.)

MINERAL REVENUES: THE 1988 REPORT ON RECEIPTS FROM FEDERAL AND INDIAN LEASES

WITH SUMMARY DATA FROM 1920 TO 1988

U.S. DEPARTMENT OF THE INTERIOR
MINERALS MANAGEMENT SERVICE

ROYALTY MANAGEMENT PROGRAM

U.S. DEPARTMENT OF THE INTERIOR

Manuel Lujan, Jr., Secretary

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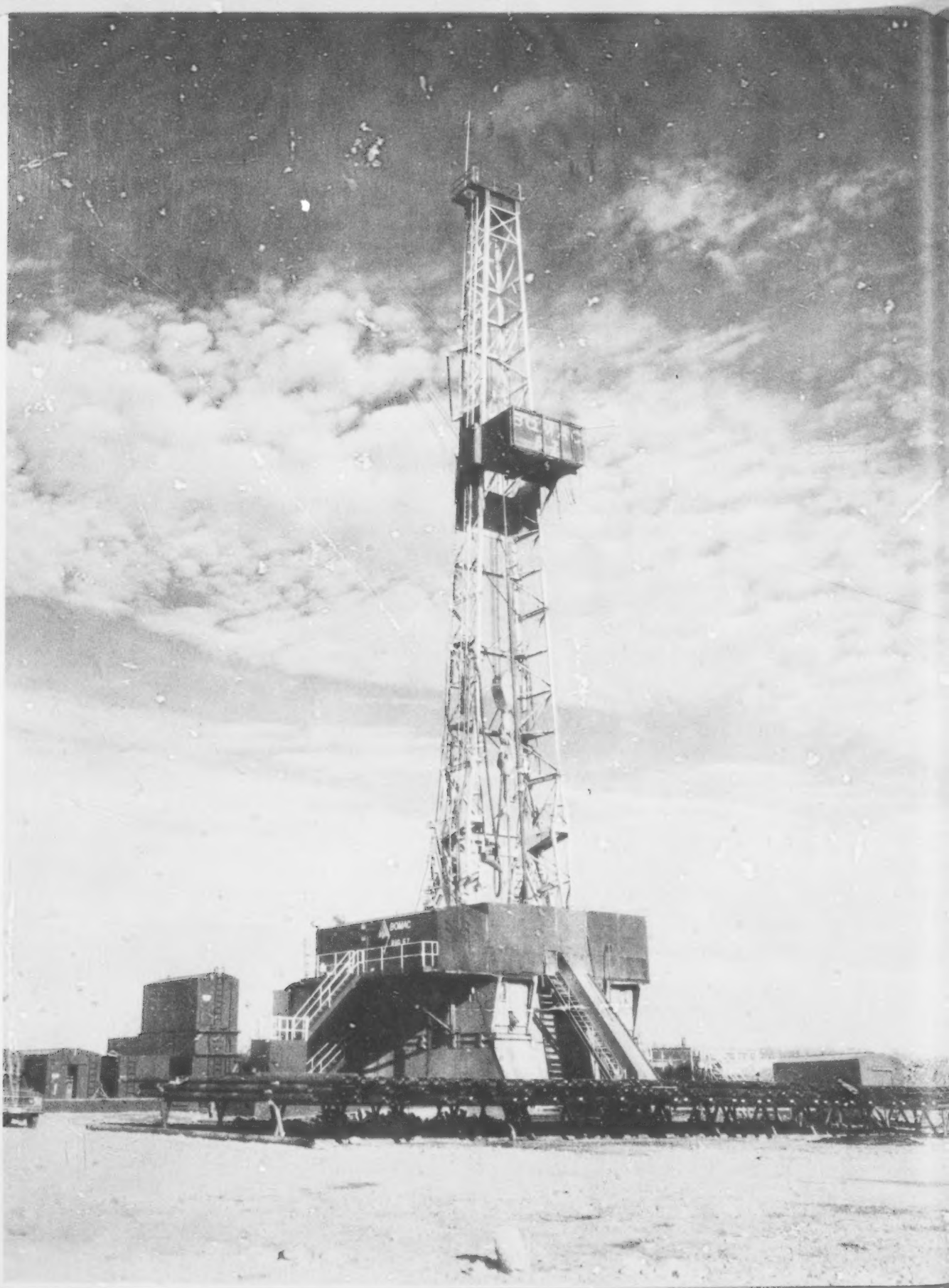
Oil and gas drill site, North Dakota. (Photo courtesy Texaco Inc.)



FOREWORD

The Minerals Management Service (MMS) is pleased to present the 1988 report on receipts from Federal and Indian mineral leases. Mineral revenues from Federal and Indian lands increased 11.3 percent, from $3.8 billion in 1987 to nearly $4.3 billion in 1988. Offshore bonus receipts from competitive lease sales rose 146 percent, or $726.5 million, from $497 million in 1987 to $1.2 billion in 1988, reflecting a continuation of the resurgence in interest in offshore exploration and development by U.S. petroleum firms. The $4.3 billion in royalties, rents, and bonuses in 1988 continued to provide a major source of income to the U.S. Treasury, State governments, and Indian Tribes and allottees.

The Department of the Interior initiated or continued a series of program activities in 1988 designed to improve the delivery of minerals management services through the MMS Royalty Management Program (RMP).

- The MMS assembled a Systems Improvement Team to identify, design, and implement improvements to RMP automated systems in 1986. A report was issued in August 1988 identifying a 3-year implementation plan for the various proposals, as well as a long-term systems strategy for RMP. A number of improvements benefiting States, Indians, and industry were implemented in 1988.

- Nearly $77.7 million in additional royalties, interest, and liquidated damages was collected in Fiscal Year 1988 through audit and other royalty underpayment detection programs.

- Implementation of automated production accounting for all onshore oil and gas leases was initiated in 1988. Approximately 65 percent of production was converted during the year.

- The Secretary of the Interior appointed 27 individuals in June 1988 to serve on the new Royalty Management Advisory Committee (RMAC). The RMAC convened in September 1988 to hear briefings addressing current RMP initiatives, including accounting and auditing systems improvements.

- Final product value regulations for oil, gas, and coal were published in the Federal Register in 1988 and the beginning of 1989, culminating months of public hearings and comment periods.

- The RMP policy for review of refund requests on Outer Continental Shelf (OCS) leases was modified in March 1988, raising the threshold for pre-audit of an OCS refund request from $50,000 to $250,000. The modification will expedite the refund and approval process. Refunds under $250,000 may be reviewed during scheduled company audits or at any time deemed appropriate.

The Department and MMS look forward to our continuing association with States, Tribes, and industry as we expand and improve our services.

Barry Williamson

BARRY A. WILLIAMSON
Director

MINERAL REVENUE MANAGEMENT IN 1988

The Department of the Interior and the royalty management staff of the Minerals Management Service (MMS) continued efforts to improve accountability for the Nation's mineral revenues in 1988. Significant program changes were initiated or implemented during the year, and approximately $77.7 million in additional royalties, interest, and liquidated damages was collected in Fiscal Year (FY) 1988 through audits, industry refund denials, exception processing, and a comparison of production and royalty reporting.

Mineral revenues from royalties, rents, and bonuses on Federal lands and from royalties and rents on Indian lands increased 11.3 percent, from $3.8 billion in 1987 to nearly $4.3 billion in 1988. The increase resulted from a renewed interest in offshore exploration and development by U.S. petroleum firms manifested by increased leasing activity on Outer Continental Shelf (OCS) lands (tables 1 and 2).

Management Improvement Efforts

A series of program initiatives was introduced or continued during the year to resolve problems and to achieve the mission of the Royalty Management Program (RMP).

The MMS assembled a Systems Improvement Team in November 1986 to identify, design, and implement improvements to RMP automated systems. The process involved a two-phased approach. Phase I was completed in November 1987 with the assistance of the Secretary of the Interior's (Secretary) Royalty Management Advisory Committee (RMAC). Phase I examined current systems objectives and operating policies to develop recommendations for future systems.

At the conclusion of Phase I, a number of improvements benefiting States, Indians, and industry were identified and scheduled for early implementation. Some of the more significant improvements implemented in 1988 follow:

- The RMP now notifies reporters, upon request, when discrepancies between production reported to the Production Accounting and Auditing System (PAAS) and royalties reported to the Auditing and Financial System (AFS) have been resolved. The RMP further implemented assessment procedures for late and missing PAAS offshore reports.

- An initiative to allow industry 90 days to make retroactive adjustments, without interest charges, following the month of approval of a unit or communitization agreement was implemented in January 1988. The 90-day period provides sufficient time for industry to report adjustments to ensure an accurate distribution of royalties to recipients.

- The RMP introduced automated internal controls in February 1988 to monitor royalty adjustments to leases that have been audited. The controls strengthen the integrity of the audit process.

RMP employee monitors operation of IBM mainframe computer at headquarters in Lakewood, Colorado.

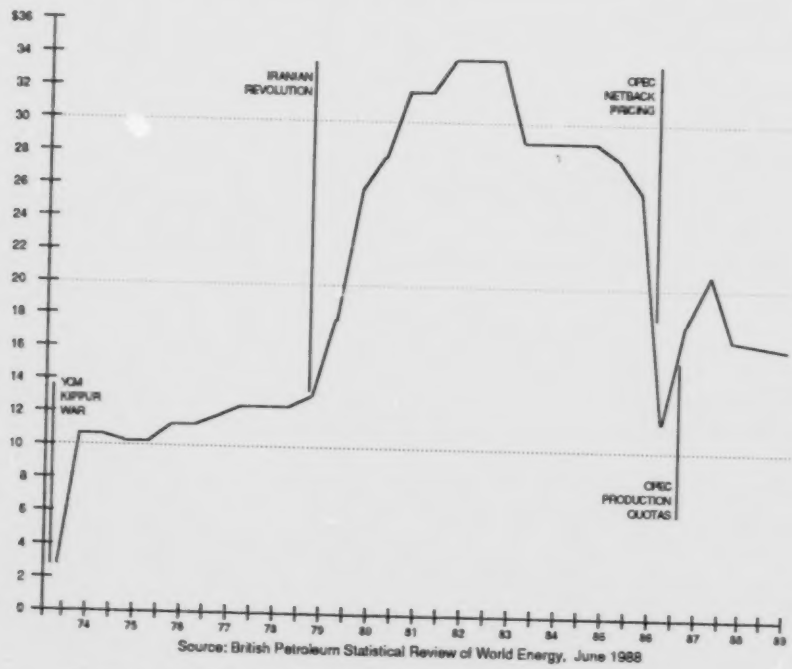
- Corrections were made to royalty rates and unit values on the AFS Explanation of Payment (EOP) Reports provided to States and Indians. The corrections appeared on EOP Reports beginning on May 31, 1988.

- The RMP eliminated zero-sales reporting and nonrespondent exception processing for OCS leases and solid mineral leases in June 1988. The RMP will verify zero-sales reporting and monitor a payor's failure to submit royalty reports through the AFS/PAAS comparison.

Phase II of the systems improvement effort, involving feasibility assessment of Phase I recommendations and development of a plan for their implementation, was initiated in 1988. A report was issued in August 1988 identifying a 3-year implementation plan for the various proposals, as well as a long-term systems strategy for RMP.

Audit efforts continued to expand in 1988. The number of lease audits completed during the year rose 23 percent, from 2,148 audits at the end of FY 1987 to 2,633 audits at the end of FY 1988. Audit collections through the MMS Royalty Compliance Division (RCD) totaled $26.9 million in FY 1988. The RCD auditors further reviewed and disapproved $16.4 million in refund requests sought by industry during the period.

The Secretary pursued an aggressive program to maintain contracts and provide audit funding in FY 1988 to one Indian Tribe, the Navajo Nation, and eight States, including Alaska, California, Colorado, Montana, North Dakota, Oklahoma, Utah, and Wyoming, under the authority provided in sections 202 and 205 of the Federal Oil and Gas Royalty Management Act of 1982. The MMS received applications in FY 1988 from the Northern Ute and the Shoshone and Arapaho Tribes for new funded audit agreements under section 202 to become effective in FY 1989.



Source: British Petroleum Statistical Review of World Energy, June 1988

Figure 1. --- Crude oil prices, in dollars, 1973-1988

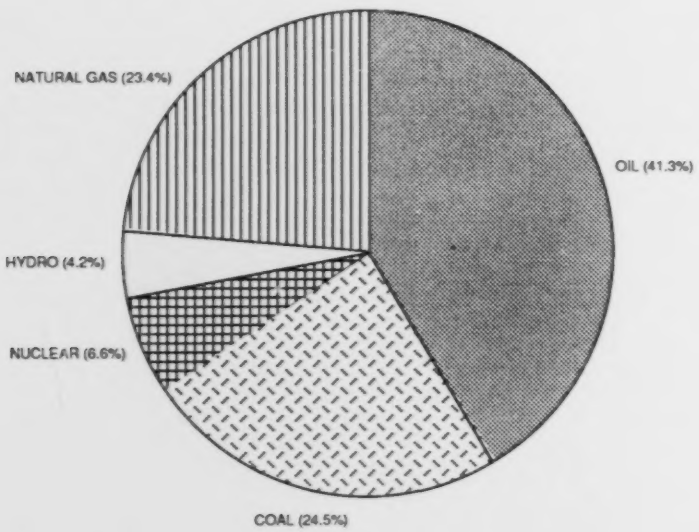
The MMS further maintained joint unfunded audit and data sharing agreements with the Jicarilla Apache Tribe, the Southern Ute Tribe, and the State of New Mexico to perform audits of Federal oil and gas leases, and agreements with the States of Montana and Utah to perform audits of Federal coal leases. Collections of additional royalties generated by funded and unfunded Tribal and State audit efforts totaled $9.9 million in FY 1988.

The collective audit programs resulted in additional royalties, late-payment interest assessments, liquidated damages, and refund denials of $53.2 million in FY 1988.

The three principal operating systems in RMP, AFS, the Bonus and Rental Accounting Support System (BRASS), and PAAS, continued successful operations in 1988. The PAAS continued to collect and process monthly production data from all Federal offshore oil and gas leases, all Federal onshore solid mineral leases, and a portion of Federal and Indian onshore oil and gas leases. Comparisons between sales reported to AFS and corresponding production reported to PAAS generated nearly $10.2 million in additional royalty collections in FY 1988.

Work to automate production accounting for the remainder of the onshore oil and gas leases continues. During 1988, software was developed and implemented, the well and lease/agreement database was verified and reconciled, training was provided to contractors and operators, and State and Indian reporting requirements were determined. Approximately 65 percent of onshore production was converted by October 1988.

Automated exception processing generated nearly $14.3 million in FY 1988 in liquidated damages and interest for erroneous reporting, late reporting, and failure to report mineral lease revenues. Interest is assessed at the prevailing Internal Revenue Service penalty rate.



Source: British Petroleum Statistical Review of World Energy, June 1988

Figure 2. --- 1988 U.S. energy consumption by commodity

A new Charter was signed in September 1987 extending the life of the Department's RMAC for a 2-year period. The Secretary appointed 27 individuals in June 1988 to serve under the new RMAC Charter. The RMAC is composed of 6 Indian representatives, 9 States' representatives, 11 industry representatives, and the chairman, Dr. Charles J. Mankin, Director of the Oklahoma Geological Survey. The RMAC convened once in 1988, on September 8 and 9, to hear briefings addressing current RMP activities and plans, including accounting and auditing systems improvements. In addition, representatives from the Bureau of Indian Affairs (BIA), the Bureau of Land Management (BLM), and MMS conducted presentations concerning Indian lease and royalty management.

Final product valuation regulations for oil and gas were published in the Federal Register on January 15, 1988. This followed a year of public hearings and comment periods in which divergent and often conflicting views of product valuation were raised by State, Indian, and industry representatives. The regulations became effective on March 1, 1988.

During the period February through April of 1988, MMS provided multiple payor training sessions on the new product valuation regulations. These sessions included both an overview of the revised valuation procedures and a summary of the calculation and reporting requirements for transportation and processing allowances. The regulations require MMS to monitor and review the allowances.

The MMS conducted a meeting from June 7 to 9, 1988, for congressional staffs, States, Tribes, and industry to review a draft of a further notice of proposed rulemaking for coal product valuation. The Further Notice of Proposed Rulemaking was published in the Federal Register on July 15, 1988. A public hearing was held on September 7 and the comment period closed on September 13, 1988. The final product valuation regulations for coal were published in the Federal Register on January 13, 1989, with an effective date of March 1, 1989.

The RMP policy for review of refund requests on OCS leases was modified in March 1988 to expedite the refund and approval process. The threshold for pre-audit of an OCS refund request was raised from $50,000 to $250,000, although refunds under $250,000 may be reviewed during scheduled company audits or at any time deemed appropriate. Refund reviews can be performed more efficiently and effectively in conjunction with a comprehensive review of a company's royalty reporting and payment process rather than as an independent audit.

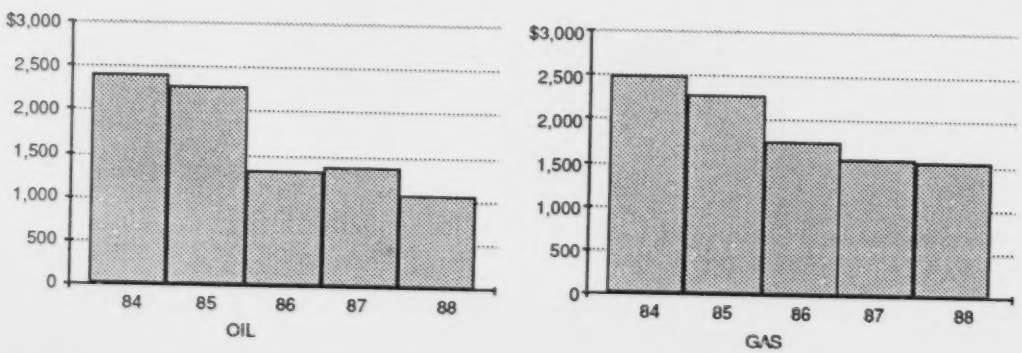


Figure 3. --- Royalties, in millions, from Federal and Indian mineral leases, 1984-1988

The Department established a BIA/BLM/MMS Tripartite Steering Committee (Committee) in December 1987 to consolidate other steering committees that had operated during the previous 3 years. The new Committee integrates the Department's efforts to administer Federal and Indian lease and royalty management programs. The Committee took action in 1988 on a number of issues, including implementation of a Memorandum of Understanding between the three Bureaus, increased automated data transfer, bonding of onshore royalty obligations, and inspection and reconciliation of Indian leases.

The Department continued aggressive efforts to improve services to Indian Tribes and allottees. The MMS Office of External Affairs (OEA) continued onsite visits with Tribes, allottee organizations, and BIA offices to discuss the RMP organization, payor reporting procedures on Indian leases, royalty accounting and EOP reports, and revisions to the Indian Lease Audit Strategy. During these visits, OEA sought onsite resolution of allottee royalty problems. Accounting reviews were performed where onsite resolution was not possible. Indian Tribes and allottee groups were encouraged to participate in the development of systems improvements and product valuation regulations.

Mineral Production and Revenues

Revenues from the OCS increased 14.8 percent, from $2.9 billion in 1987 to nearly $3.4 billion in 1988. Offshore bonuses from competitive lease sales rose $726.5 million, from $497 million in 1987 to $1.2 billion in 1988 (tables 1 and 2). Acreage leased on the OCS for mineral production grew by 4.8 million acres in 1988 (table 18). This reflects a rekindled interest by U.S. petroleum firms in offshore exploration and development.

Federal onshore royalties declined 4.8 percent, from $682 million in 1987 to $650 million in 1988 (table 1). Oil production dropped 7.3 percent while oil royalties fell more than 20 percent, reflecting a decline in oil prices from the previous year. Gas production and royalties were stable throughout the year. Coal production jumped 16.4 percent, with royalties increasing a corresponding 13.3 percent (figure 12 and table 19). The increase is attributed to a rise in coal consumption by public utilities due to the prevailing droughts in the United States and Canada that reduced hydroelectric power production in both nations. Onshore Federal oil and gas bonus receipts, generated by competitive lease sales, grew 57.5 percent, from $34.8 million in 1987 to $54.7 million in 1988 (tables 23 and 24). This again reflects a renewed interest in petroleum exploration by U.S. firms.

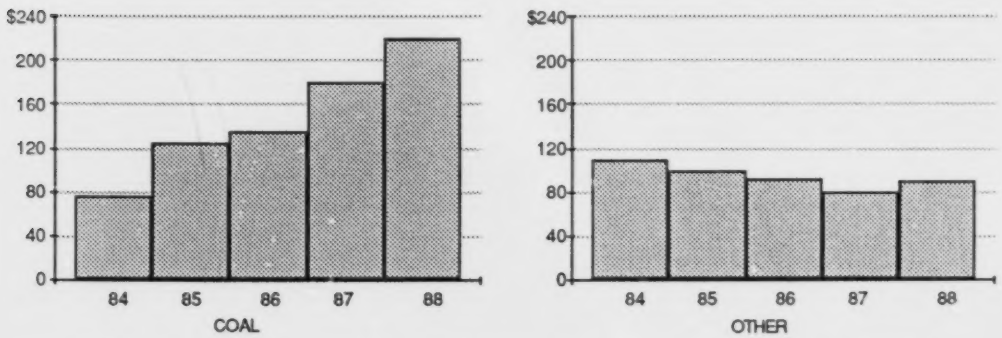


Figure 3. --- Royalties, in millions, from Federal and Indian mineral leases, 1984-1988 (continued)

Indian revenues from royalties and rents rose $7.5 million, from $106 million in 1987 to $113.5 million in 1988. The increase is again attributed to a significant rise in coal production and attendant royalties due to the growth in consumption by public utilities. Rental payments remained stable (table 1).

Interest in the royalty-in-kind (RIK) program remained low in 1988. Two offshore and four onshore contractors participated in the program during the year. The contractors collectively purchased less than 8 million barrels of oil valued at $102.3 million (table 30). The sustained decline in interest in the RIK program is attributed to the availability of low-priced crude oil on the open market.

Report Format

A number of revisions have been made to improve the utility of the 1988 Report. All tables have been reformatted to improve their appearance and use. Table 26 in the Distribution chapter of the 1987 Report, addressing current year collections of royalties, rents, and bonuses, has been relocated as Table 2 in the Management chapter of the 1988 Report to improve the continuity of the publication. Tables in the 1988 Report have been renumbered, in part, to accommodate this change. The table numbers in the 1987 Report and the corresponding table numbers in the 1988 Report are provided in the Appendix on page 101. Three new indices addressing general, commodity, and State information begin on page 102.

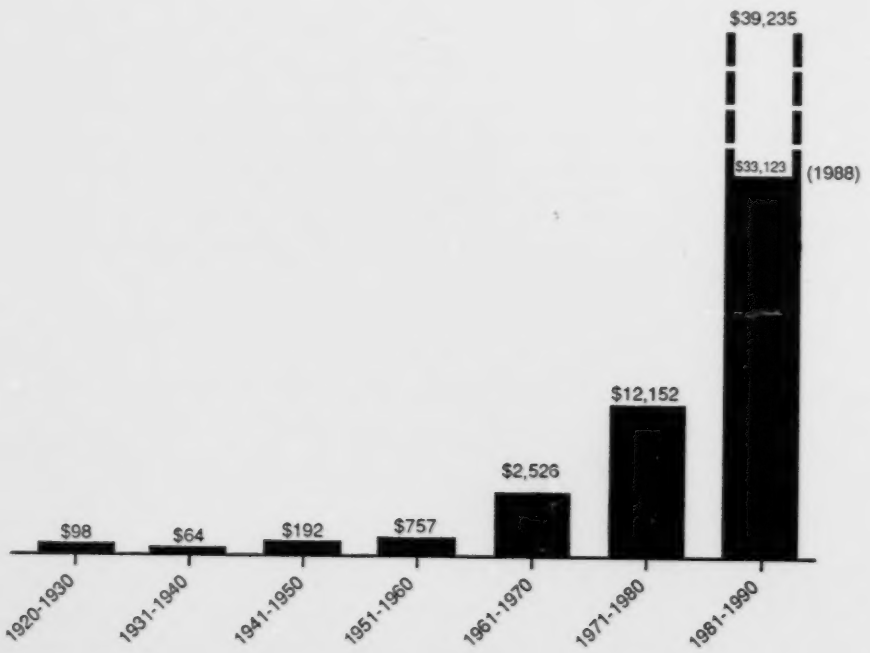


Figure 4. --- Royalties, in millions, from Federal and Indian mineral leases, 1920-1990

Some information in this report necessarily includes estimated data that may be revised subsequent to publication.

All information in this report is by calendar year unless specifically noted otherwise. Information in parentheses in this report is attributed to credits for prior-year adjustments.

Production volume for individual commodities is measured in standard units throughout the report. Oil is measured in barrels (42 U.S. gallons); gas and carbon dioxide is measured in Mcf (thousand cubic feet); gas plant products are measured in gallons; geothermal and heated water sources are measured in millions of Btu's; and solid minerals are measured in short tons (2,000 lbs.).

Minerals referred to in this report as "Other" or as "Other Production" may include the following solid and fluid minerals: amethyst, barite, bentonite, carbon dioxide, chat, clay, copper, feldspar, fluorspar, garnet sands, gas lost, gas plant products, geothermal energy, gilsonite, gold, gypsum, helium, hot water, iron ore, langbeinite, lead, leonardite, limestone, magnesium, molybdenum, nitrogen, oil lost, oil shale, phosphate, potash, potassium, purge liquor, quartz crystals, salt, sand and gravel, scoria, silica sand, silver, soda ash, sodium, sulfur, sylvite, trona ore, tungsten, uranium, wavellite, and zinc. Gas plant products include gasoline, liquid petroleum gas, propane, butane, and other gas commodities measured in gallons. Some of these minerals are referenced in tables 4, 5, 6, 7, 8, 9, 10, 20, 23, 26, and 33.

RMP headquarters in Lakewood, Colorado.

Table 1.--1988 revenues from Federal and Indian mineral leases in the United States

	Royalties	Minimum Royalties	Rents	Bonuses	TOTAL
Offshore Federal	$2,078,601,613	$16,822,821	$ 61,174,345	$1,223,752,174	$3,380,350,953
Onshore Federal	649,534,932	11,279,396	64,810,845	59,394,838	785,020,011
Indian Tribal & Allottee	112,282,668	N/A	1,255,603	*	113,538,271
TOTAL	$2,840,419,213	$28,102,217	$127,240,793	$1,283,147,012	$4,278,909,235

*Bonus revenues are collected by the Bureau of Indian Affairs.

Table 2.--1988 royalties, rents, and bonuses from Federal and Indian mineral leases in the United States

	FEDERAL LANDS		INDIAN	TOTAL
	Offshore	Onshore	LANDS	REVENUES
Oil Royalties	$ 747,454,359	$230,896,902	$ 36,046,679	$1,014,397,940
Gas Royalties	1,310,301,872	182,044,265	22,492,041	1,514,838,178
Coal Royalties	N/A	172,795,745	46,691,767	219,487,512
Other Royalties	20,845,382	63,798,020	7,052,181	91,695,583
Minimum Royalties*	16,822,821	11,279,396	N/A	28,102,217
Rents	61,174,345	64,810,845	1,255,603	127,240,793
Bonuses	1,223,752,174	59,394,838	**	1,283,147,012
TOTAL	$3,380,350,953	$785,020,011	$113,538,271	$4,278,909,235

*Minimum royalties, by terms of the lease, are collected for Federal offshore and onshore leases after the expiration of the lease year that commences after the discovery of paying quantities.

**Bonus revenues are collected by the Bureau of Indian Affairs.

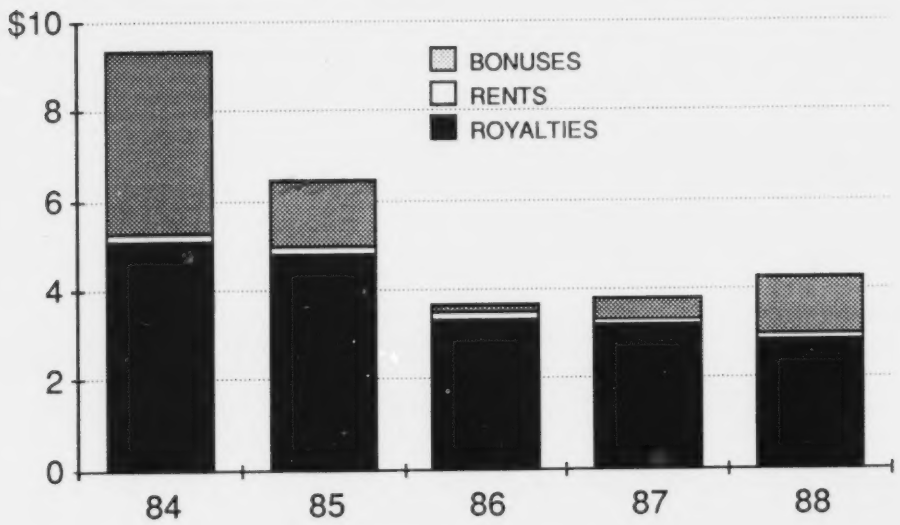


Figure 5. --- Revenues, in billions, from Federal and Indian mineral leases, 1984-1988

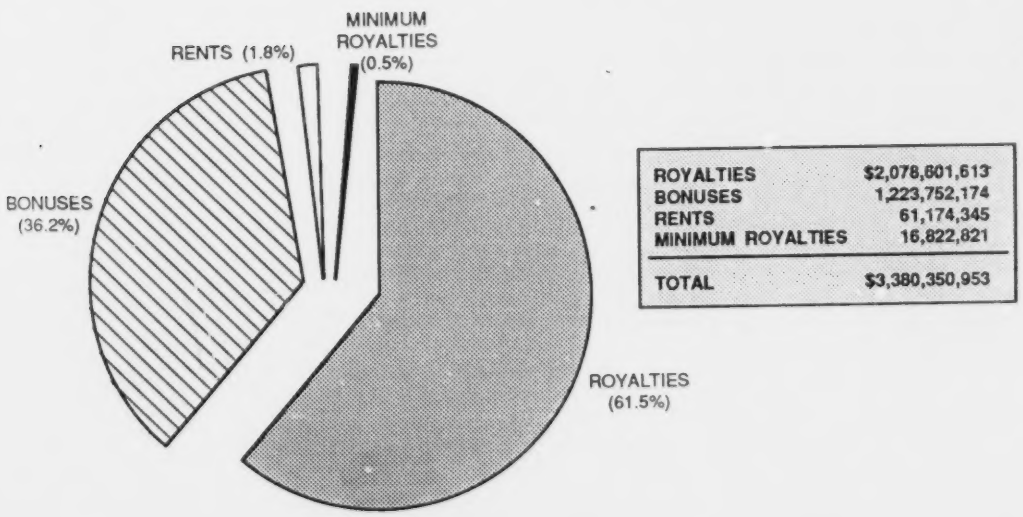


Figure 6. --- 1988 royalties from Federal and Indian mineral leases by commodity

Table 3.--Summary of royalty revenues other than rents and bonuses collected from Federal and Indian mineral leases in the United States, 1920-88

	1920-84			1985			1986		
	Volume	Value	Royalties	Volume	Value	Royalties	Volume	Value	Royalties
OIL PRODUCTION									
Federal Lands	13,750	$114,577	$17,417	559	$14,739	$2,200	547	$ 8,657	$1,284
Indian Lands	1,193	6,664	940	20	520	75	20	295	42
Subtotal	14,943	$121,241	$18,357	579	$15,259	$2,275	567	$ 8,952	$1,326
GAS PRODUCTION									
Federal Lands	95,669	$ 94,798	$14,749	4,994	$14,031	$2,234	4,771	$10,883	$1,743
Indian Lands	3,485	2,379	323	103	304	36	98	227	27
Subtotal	99,154	$ 97,177	$15,072	5,097	$14,335	$2,270	4,869	$11,110	$1,770
COAL PRODUCTION									
Federal Lands	1,070	$ 10,352	$ 354	159	$ 2,331	$ 103	167	$ 2,486	$ 108
Indian Lands	303	2,472	87	25	441	23	23	407	29
Subtotal	1,373	$ 12,824	$ 441	184	$ 2,772	$ 126	190	$ 2,893	$ 137
OTHER PRODUCTION									
Federal Lands	N/A	$ 13,936	$ 777	N/A	$ 1,101	$ 94	N/A	$ 1,009	$ 89
Indian Lands	N/A	1,735	186	N/A	41	5	N/A	49	6
Subtotal	N/A	$ 15,671	$ 963	N/A	$ 1,142	$ 99	N/A	$ 1,058	$ 95
TOTAL		$246,913	$34,833		$33,508	$4,770		$24,013	$3,328

NOTE: Data are rounded: dollars in millions for both market value and revenues; oil in millions of barrels; natural gas in millions of Mcf; coal in millions of short tons.

SOURCE: U.S. Geological Survey and the Minerals Management Service, Department of the Interior.

Table 3.--Summary of royalty revenues other than rents and bonuses collected from Federal and Indian mineral leases in the United States, 1920-88 (cont.)

1987			1988			1920-88			
Volume	Value	Royalties	Volume	Value	Royalties	Volume	Value	Royalties	
									OIL PRODUCTION
516	$ 8,734	$1,288	460	$ 6,702	$ 978	15,832	$153,409	$23,167	Federal Lands
19	322	45	17	247	36	1,269	8,048	1,139	Indian Lands
535	$ 9,056	$1,334	477	$ 6,949	$1,014	17,101	$161,457	$24,306	Subtotal
									GAS PRODUCTION
5,313	$ 9,610	$1,522	5,212	$ 9,391	$1,492	115,959	$138,713	$21,740	Federal Lands
108	183	22	103	175	22	3,897	3,268	430	Indian Lands
5,421	$ 9,793	$1,544	5,315	$ 9,566	$1,514	119,856	$141,981	$22,170	Subtotal
									COAL PRODUCTION
171	$ 2,670	$ 152	199	$ 2,430	$ 173	1,766	$ 20,269	$ 890	Federal Lands
24	443	30	26	490	47	401	4,253	216	Indian Lands
195	$ 3,113	$ 182	225	$ 2,920	$ 220	2,167	$ 24,522	$ 1,106	Subtotal
									OTHER PRODUCTION
N/A	$ 937	$ 71	N/A	$ 1,256	$ 85	N/A	$ 18,239	$ 1,116	Federal Lands
N/A	51	6	N/A	55	7	N/A	1,931	210	Indian Lands
N/A	$ 988	$ 77	N/A	$ 1,311	$ 92	N/A	$ 20,170	$ 1,326	Subtotal
	$22,950	$3,137		$20,746	$2,840		$348,130	$48,908	TOTAL

Table 4.--1988 volume, market value, and royalties for selected minerals from OCS, Federal onshore, and Indian mineral leases

	Production Volume	Market Value	Royalties Received
FLUID MINERALS			
Carbon Dioxide	192,344,887	$ 120,080,713	$ 9,990,923
Gas	5,314,847,233	9,566,702,680	1,514,838,178
Gas Lost	837,156	2,493,717	312,152
Gas Plant Products	1,309,355,908	314,169,527	33,955,668
Geothermal	11,786,273	100,136,451	12,265,355
Hot Water	1,228,492	9,986,139	980,688
Oil	476,533,156	6,949,033,549	1,014,397,940
Oil Lost	442	5,344	541
Salt	44	2,619	437
Sulfur	(4,309)	415,005	(120,177)
TOTAL		$17,063,025,744	$2,586,621,705
SOLID MINERALS			
Coal	225,439,864	$ 2,920,469,084	$ 219,487,512
Copper	87,268	45,303,771	2,953,522
Fluorspar	809	134,745	6,064
Lead	298,405	148,595,319	4,355,667
Limestone	158,256	619,976	21,409
Phosphate	7,079,484	67,683,409	5,589,819
Potash	1,742,184	137,599,474	2,998,652
Sand-Gravel	8,411,233	22,218,665	2,802,972
Sodium	3,875,425	266,972,036	13,434,654
Zinc	61,409	29,169,699	1,073,243
TOTAL		$ 3,638,766,178	$ 252,723,514

Table 5.--1988 volume, market value, and royalties for selected minerals from OCS mineral leases

	Production Volume	Market Value	Royalties Received
FLUID MINERALS			
Gas	4,309,874,827	$ 7,946,040,609	$1,310,301,872
Gas Lost	121,699	144,201	18,653
Gas Plant Products	721,357,611	168,314,496	20,808,745
Oil	320,667,424	4,814,904,938	747,454,359
Oil Lost	8	140	23
Salt	44	2,619	437
Sulfur	890	104,932	17,524
TOTAL		$12,929,511,935	$2,078,601,613

Fiscal Accounting Division employees in the RMP headquarters ensure that revenue payments are credited to the appropriate lease account and distributed to the appropriate recipient.

Table 6.--1988 volume, market value, and royalties for selected minerals from Federal onshore mineral leases

	Production Volume	Market Value	Royalties Received
FLUID MINERALS			
Carbon Dioxide	192,344,887	$ 120,080,713	$ 9,990,923
Gas	901,859,470	1,445,305,049	182,044,265
Gas Lost	651,615	2,243,109	278,437
Gas Plant Products	563,843,502	140,006,142	12,551,600
Geothermal	11,786,273	100,136,451	12,265,355
Hot Water	1,228,492	9,986,139	980,688
Oil	138,989,604	1,887,117,906	230,896,902
Oil Lost	434	5,204	518
Sulfur	(5,377)	303,274	(138,137)
TOTAL		$3,705,183,987	$448,870,551
SOLID MINERALS			
Coal	199,209,780	$2,429,997,791	$172,795,745
Copper	68,976	33,623,820	1,423,313
Fluorspar	809	134,745	6,064
Lead	298,405	148,595,319	4,355,667
Limestone	43,680	213,230	10,662
Phosphate	5,422,576	47,121,179	3,224,093
Potash	1,742,184	137,599,474	2,998,652
Sand-Gravel	3,326,183	7,051,509	394,884
Sodium	3,875,425	266,972,036	13,434,654
Zinc	61,409	29,169,699	1,073,243
TOTAL		$3,100,478,802	$199,716,977

Table 7.--1988 volume, market value, and royalties for selected minerals from Indian mineral leases

	Production Volume	Market Value	Royalties Received
FLUID MINERALS			
Gas	103,112,936	$175,357,022	$22,492,041
Gas Lost	63,842	106,407	15,062
Gas Plant Products	24,154,795	5,848,889	595,323
Oil	16,876,128	247,010,705	36,046,679
Sulfur	178	6,799	436
TOTAL		$428,329,822	$59,149,541
SOLID MINERALS			
Coal	26,230,084	$490,471,293	$46,691,767
Copper	18,292	11,679,951	1,530,209
Limestone	114,576	406,746	10,747
Phosphate	1,656,908	20,562,230	2,365,726
Sand-Gravel	5,085,050	15,167,156	2,408,088
TOTAL		$538,287,376	$53,006,537

Table 8.--Summary of volume, market value, and royalties for selected minerals from OCS, Federal onshore, and Indian mineral leases, 1920-88

	Production Volume	Market Value	Royalties Received
FLUID MINERALS			
Carbon Dioxide	836,749,875	$ 482,056,794	$ 53,121,744
Gas	119,854,324,177	141,981,356,773	22,171,696,162
Gas Lost	147,873,956	103,558,566	14,939,690
Gas Plant Products	37,742,223,195	4,838,595,314	421,792,424
Geothermal	130,719,474	594,880,083	74,069,163
Hot Water	1,956,510	16,664,919	1,712,279
Oil	17,099,273,856	161,456,574,160	24,307,453,781
Oil Lost	210,870	2,249,071	274,263
Salt	4,765,723	1,497,331	235,587
Sulfur	21,495,796	430,875,977	47,454,424
TOTAL		$309,908,308,988	$47,092,749,517
SOLID MINERALS			
Coal	2,166,492,124	$ 24,521,385,975	$ 1,108,433,954
Copper	788,149	289,545,234	20,598,966
Fluorspar	339,438	23,342,179	957,037
Lead	12,852,819	2,260,742,750	105,643,157
Limestone	3,877,703	6,837,516	334,759
Phosphate	148,510,497	961,587,244	62,528,029
Potash	140,849,472	4,299,915,278	164,452,267
Sand-Gravel	171,145,113	233,077,772	22,119,533
Sodium	91,923,095	3,942,695,432	182,718,754
Uranium	35,681,320	832,241,221	112,718,513
Zinc	1,633,324	368,633,214	15,861,878
Miscellaneous	26,716,374	480,250,088	24,661,463
TOTAL		$ 38,220,253,903	$ 1,821,028,310

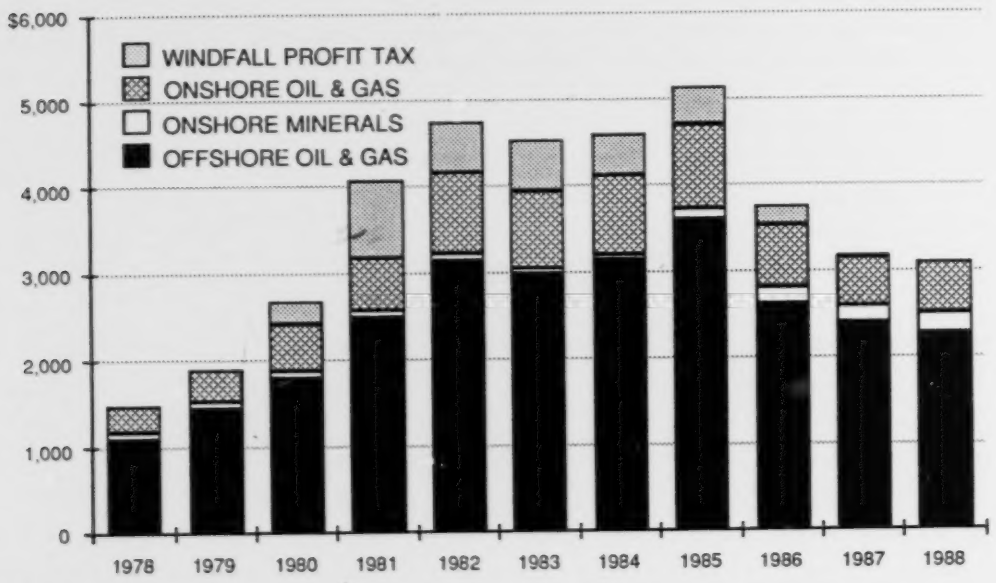


Figure 7. --- Royalties, in millions, by fiscal year from Federal and Indian mineral leases, 1978-1988

Geophysicist uses computer technology to analyze seismic data improving the accuracy of drilling decisions. (Photo courtesy Sun Company, Inc.)

Table 9.--Summary of selected 1988 mineral production from OCS, Federal onshore, and Indian mineral leases as a percentage of total U.S. production

	U.S. Total	OCS	Federal Onshore	Indian	Federal and Indian Total
OIL IN BARRELS					
Production Volume	2,967	321	139	17	477
% U.S. Total		10.8	4.7	0.6	16.1
GAS IN MCF					
Production Volume	17,457	4,310	902	103	5,315
% U.S. Total		24.7	5.2	0.6	30.4
COAL IN TONS					
Production Volume	959	---	199	26	225
% U.S. Total		---	20.8	2.7	23.5
LEAD IN TONS					
Production Volume	430	---	298	---	298
% U.S. Total		---	69.3	---	69.3
PHOSPHATE IN TONS					
Production Volume	50,706	---	5,423	1,657	7,080
% U.S. Total		---	10.7	3.3	14.0
POTASH IN TONS					
Production Volume	2,943	---	1,742	---	1,742
% U.S. Total		---	59.2	---	59.2
SODIUM IN TONS					
Production Volume	9,960	---	3,875	---	3,875
% U.S. Total		---	38.9	---	38.9

NOTE: 1988 U.S. production data are estimated. Data by calendar year are rounded: oil, including crude and condensate, in millions of barrels; natural gas in millions of Mcf; coal, including anthracite, bituminous, and lignite, in millions of short tons; and lead, phosphate, potash, and sodium in thousands of short tons.

SOURCE: Monthly Energy Review, January 1989, Department of Energy, and 1988 Minerals Yearbook, Bureau of Mines, for U.S. totals; certain other data are estimated in part by the Minerals Management Service.

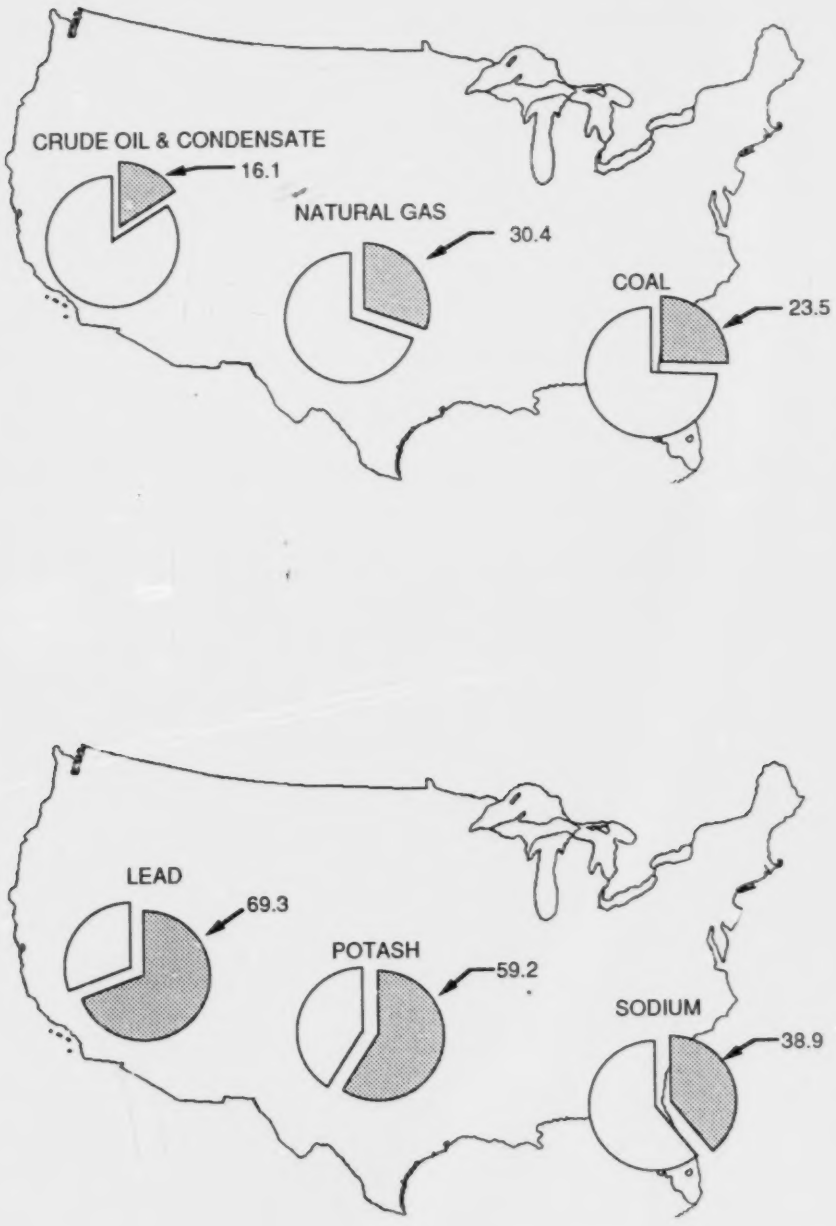


Figure 8. --- 1988 Federal and Indian mineral production as a percentage of total U.S. production

Table 10.--Summary of selected mineral production from OCS, Federal onshore, and Indian mineral leases as a percentage of total U.S. production, 1950-88

	OIL IN BARRELS		PERCENTAGE
	Total U.S. Volume	Federal & Indian	OF U.S. TOTAL
1950-83	98,044	12,945	13.2
1984	3,241	544	16.8
1985	3,274	579	17.7
1986	3,168	566	17.9
1987	3,047	535	17.6
1988	2,967	477	16.1
1950-88	113,741	15,646	13.8

	GAS IN MCF		PERCENTAGE
	Total U.S. Volume	Federal & Indian	OF U.S. TOTAL
1950-83	540,382	91,352	16.9
1984	18,230	5,751	31.5
1985	17,198	5,097	29.6
1986	16,791	4,869	29.0
1987	17,349	5,422	31.3
1988	17,457	5,315	30.4
1950-88	627,407	117,806	18.8

	COAL IN TONS		PERCENTAGE
	Total U.S. Volume	Federal & Indian	OF U.S. TOTAL
1950-83	17,310	1,042	6.0
1984	896	136	15.2
1985	884	199	22.5
1986	890	202	22.7
1987	919	195	21.2
1988	959	225	23.5
1950-88	21,858	1,999	9.1

	LEAD IN TONS		PERCENTAGE
	Total U.S. Volume	Federal & Indian	OF U.S. TOTAL
1950-83	13,195	7,735	58.6
1984	369	294	79.7
1985	467	324	69.4
1986	389	289	74.3
1987	352	253	71.9
1988	430	298	69.3
1950-88	15,202	9,193	60.5

Table 10.--Summary of selected mineral production from OCS, Federal onshore, and Indian mineral leases as a percentage of total U.S. production, 1950-88 (cont.)

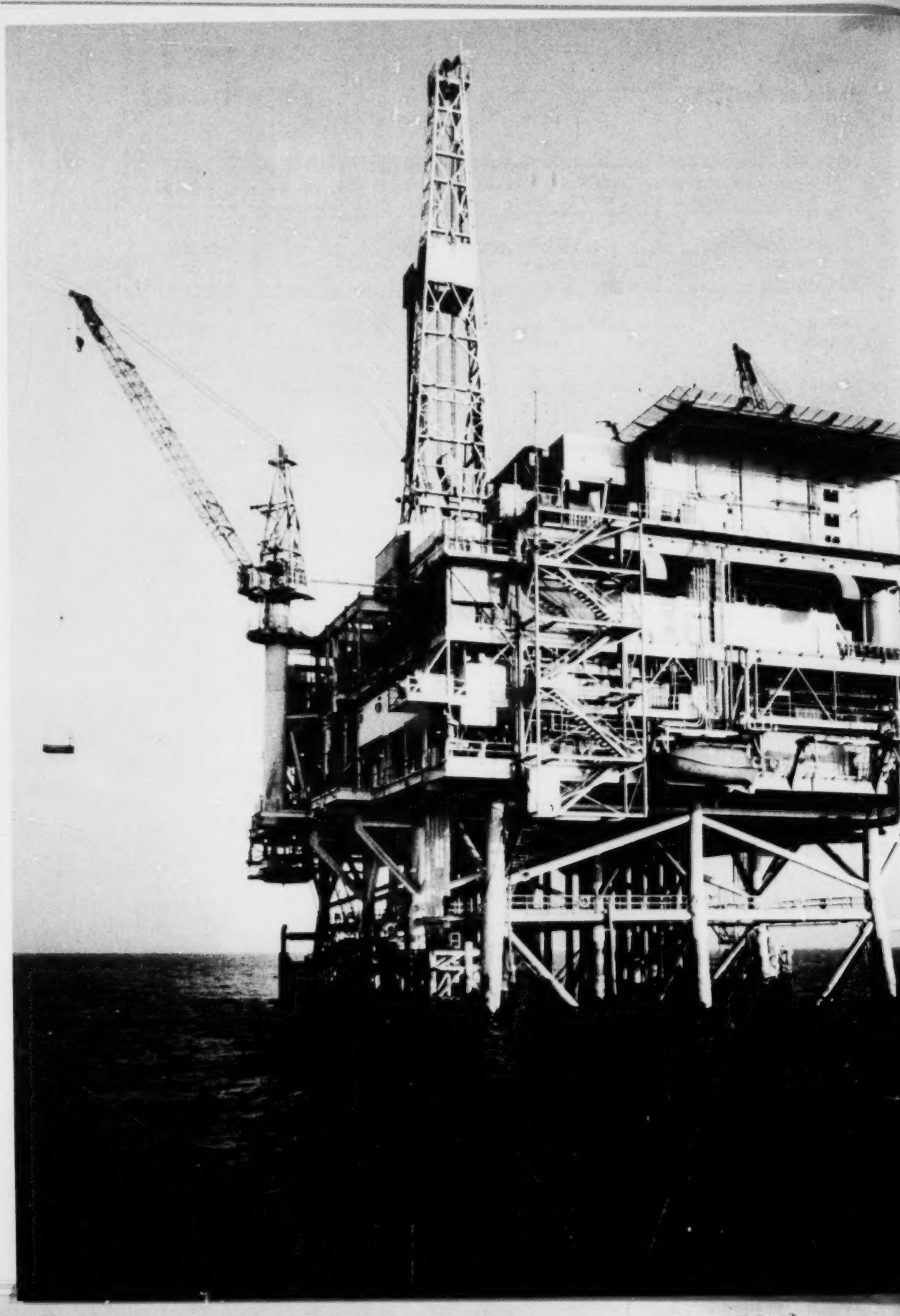
	PHOSPHATE IN TONS		PERCENTAGE
	Total U.S. Volume	Federal & Indian	OF U.S. TOTAL
1950-83	1,026,836	109,657	10.7
1984	54,230	5,294	9.8
1985	56,036	6,190	11.0
1986	44,445	4,840	10.9
1987	45,144	5,067	11.2
1988	50,706	7,080	14.0
1950-88	1,277,397	138,128	10.8

	POTASH IN TONS		PERCENTAGE
	Total U.S. Volume	Federal & Indian	OF U.S. TOTAL
1950-83	131,065	107,801	82.3
1984	3,028	2,763	91.2
1985	2,509	2,267	90.4
1986	2,327	1,267	54.4
1987	2,443	1,568	64.2
1988	2,943	1,742	59.2
1950-88	144,315	117,408	81.4

	SODIUM IN TONS		PERCENTAGE
	Total U.S. Volume	Federal & Indian	OF U.S. TOTAL
1950-83	120,691	62,032	51.4
1984	8,946	4,899	54.8
1985	8,900	5,945	66.8
1986	8,834	4,016	45.5
1987	9,273	3,996	43.1
1988	9,960	3,875	38.9
1950-88	166,604	84,763	50.9

NOTE: 1988 U.S. production data are estimated. Data by calendar year are rounded: oil, including crude oil and condensate, in millions of barrels; natural gas in millions of Mcf; coal, including anthracite, bituminous, and lignite, in millions of short tons; and lead, phosphate, potash, and sodium in thousands of short tons.

SOURCE: Monthly Energy Review, January 1989, Department of Energy, and 1988 Minerals Yearbook, Bureau of Mines, for U.S. totals; certain other data are estimated in part by the Minerals Management Service.



OFFSHORE FEDERAL MINERAL REVENUES

The $3.4 billion in royalties, rents, and bonuses from offshore oil and gas leases represented 79 percent of the $4.3 billion total revenues collected in 1988 (tables 1 and 2). Offshore oil production accounted for 73.7 percent of all oil royalties collected, while offshore gas production equaled 86.5 percent of all gas royalties collected and disbursed by the Department of the Interior in 1988 (table 2 and figure 10).

Royalties and rents from the Outer Continental Shelf (OCS) declined 11.9 percent, from $2.4 billion in 1987 to $2.2 billion in 1988 (tables 1 and 2). Bonus revenues, in contrast, increased 146 percent, from a 1987 level of $497 million to more than $1.2 billion in 1988 (table 18). Bonuses accounted for more than 36 percent of the revenues collected on the OCS in 1988 (figure 11). Increased sales of OCS oil and gas tracts during the period reflect a second year of renewed interest in offshore exploration and development by U.S. petroleum firms.

Oil production fell 12.4 percent, from 366 million barrels in 1987 to 321 million barrels in 1988. Oil royalties fell more than 25 percent, or $251.8 million, during the same period, reflecting a decline in the world oil price structure (figure 9 and table 14).

Gas production and royalties fell approximately 2 percent during the year from 1987 levels (figure 9 and table 14). The decline is associated with a continued abundance of natural gas supplies on the open market.

Revenues from gas plant products increased nearly $6.8 million, from $14 million in 1987 to $20.8 million in 1988 (table 5).

There were 5,818 offshore leases, licenses, and permits on 29.6 million acres under the supervision of the Department at the end of 1988 (table 34). This included 1,647 producing or producible offshore oil and gas leases on 7.7 million acres (table 31). The figures represent a moderate increase over corresponding 1987 leases and acreage.

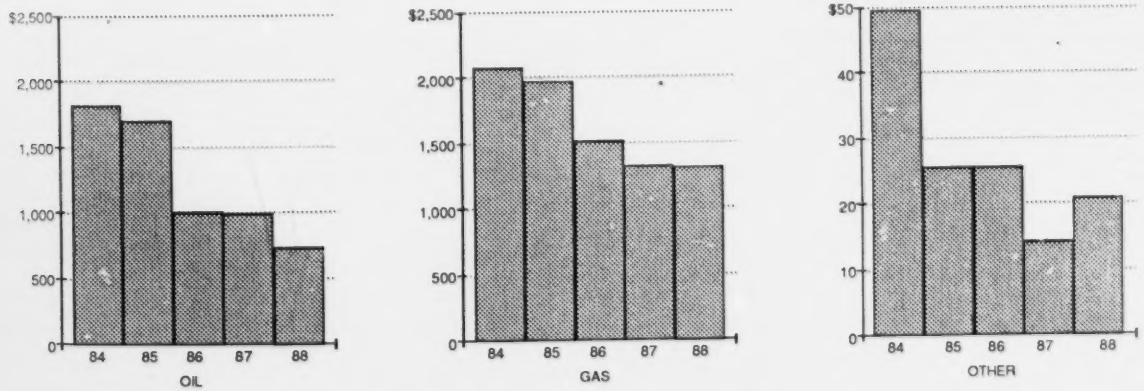


Figure 9. --- Royalties, in millions, from OCS mineral leases, 1984-1988

Offshore platform, Southern California. (Photo courtesy Chevron Inc.)

Table 11.--1988 volume, market value, and royalties by area and commodity from OCS mineral leases

	OIL IN BARRELS/GAS IN MCF		ROYALTIES
	Volume	Market Value	RECEIVED
OFFSHORE CALIFORNIA			
Oil	32,615,118	$ 322,221,171	$ 53,723,584
Gas	34,570,638	92,648,015	15,086,166
Other	N/A	108,824	9,447
Subtotal		$ 414,978,010	$ 68,819,197
OFFSHORE LOUISIANA			
Oil	261,936,530	$ 4,086,676,490	$ 632,688,293
Gas	3,096,881,628	5,705,494,358	919,994,644
Other	N/A	157,306,523	19,316,494
Subtotal		$ 9,949,477,371	$1,571,999,431
OFFSHORE TEXAS			
Oil	26,115,776	$ 406,007,277	$ 61,042,482
Gas	1,178,422,561	2,147,898,236	375,221,062
Other	N/A	11,151,041	1,519,441
Subtotal		$ 2,565,056,554	$ 437,782,985
TOTAL		$12,929,511,935	$2,078,601,613

1988 summary by commodity of volume, value, and royalties from offshore Federal mineral leases

	PRODUCTION		ROYALTIES
	Volume	Market Value	RECEIVED
OIL	320,667,424	$ 4,814,904,938	$ 747,454,359
GAS	4,309,874,827	7,946,040,609	1,310,301,872
OTHER	N/A	168,566,388	20,845,382
TOTAL		$12,929,511,935	$2,078,601,613

Table 12.--Summary of volume, market value, and royalties by area and commodity from OCS mineral leases, 1953-88

	OIL IN BARRELS/GAS IN MCF		ROYALTIES
	Volume	Market Value	RECEIVED
OFFSHORE CALIFORNIA			
Oil	435,145,095	$ 5,113,951,700	$ 994,477,649
Gas	318,361,320	709,135,152	126,799,223
Other	N/A	1,391,422	168,460
Subtotal		$ 5,824,478,274	$ 1,121,445,332
OFFSHORE LOUISIANA			
Oil	7,577,119,388	$ 91,824,643,041	$14,937,536,869
Gas	72,800,805,744	89,537,384,271	14,577,549,473
Other	N/A	2,799,419,611	303,950,477
Subtotal		$184,161,446,923	$29,819,036,819
OFFSHORE TEXAS			
Oil	202,324,364	$ 4,338,046,727	$ 693,049,337
Gas	10,332,296,659	22,110,035,278	3,729,216,756
Other	N/A	76,986,914	9,927,749
Subtotal		$ 26,525,068,919	$ 4,432,193,842
TOTAL		$216,510,994,116	$35,372,675,993

Summary by commodity of volume, value, and royalties from offshore Federal mineral leases, 1953-88

	PRODUCTION		ROYALTIES
	Volume	Market Value	RECEIVED
OIL	8,214,588,847	$101,276,641,468	$16,625,063,855
GAS	83,451,463,723	112,356,554,701	18,433,565,452
OTHER	N/A	2,877,797,947	314,046,686
TOTAL		$216,510,994,116	$35,372,675,993

Table 13.--Summary of volume, market value, and royalties by area and year from OCS mineral leases, 1953-88

OFFSHORE CALIFORNIA	OIL IN BARRELS Volume	OIL IN BARRELS Market Value	OIL ROYALTIES RECEIVED
1953-83	279,709,674	$2,736,525,293	$555,762,702
1984	30,254,306	645,004,111	122,270,587
1985	29,781,465	628,442,977	123,056,974
1986	29,227,846	358,544,517	63,973,110
1987	33,556,686	423,213,631	75,690,692
1988	32,615,118	322,221,171	53,723,584
1953-88	435,145,095	$5,113,951,700	$994,477,649

	GAS IN MCF Volume	GAS IN MCF Market Value	GAS ROYALTIES RECEIVED
1953-83	123,144,391	$ 125,216,722	$ 29,130,400
1984	27,806,899	99,218,481	16,932,454
1985	49,164,213	151,241,817	25,676,251
1986	42,689,021	129,220,799	21,888,369
1987	40,986,158	111,589,318	18,085,583
1988	34,570,638	92,648,015	15,086,166
1953-88	318,361,320	$ 709,135,152	$126,799,223

	OTHER PRODUCTION Volume	OTHER PRODUCTION Market Value	OTHER ROYALTIES RECEIVED
1953-83	N/A	$ 639,102	$ 40,997
1984	N/A	546,832	99,800
1985	N/A	96,664	18,216
1986	N/A	---	---
1987	N/A	---	---
1988	N/A	108,824	9,447
1953-88	N/A	$ 1,391,422	$ 168,460

Table 13.--Summary of volume, market value, and royalties by area and year from OCS mineral leases, 1953-88 (cont.)

OFFSHORE LOUISIANA	OIL IN BARRELS Volume	OIL IN BARRELS Market Value	OIL ROYALTIES RECEIVED
1953-83	6,010,153,216	$57,545,590,376	$ 9,458,466,309
1984	318,024,622	9,539,401,648	1,597,398,742
1985	338,901,863	9,423,450,783	1,493,901,392
1986	340,152,276	5,740,306,865	899,889,359
1987	307,950,881	5,489,216,879	855,192,774
1988	261,936,530	4,086,676,490	632,688,293
1953-88	7,577,119,388	$91,824,643,041	$14,937,536,869

	GAS IN MCF Volume	GAS IN MCF Market Value	GAS ROYALTIES RECEIVED
1953-83	56,900,359,597	$53,326,327,791	$ 8,668,859,378
1984	3,578,740,570	9,656,366,956	1,551,459,784
1985	3,116,884,490	8,468,902,650	1,420,442,835
1986	2,927,832,264	6,505,111,673	1,081,739,674
1987	3,180,107,195	5,775,180,843	935,053,158
1988	3,096,881,628	5,705,494,358	919,994,644
1953-88	72,800,805,744	$89,537,384,271	$14,577,549,473

	OTHER PRODUCTION Volume	OTHER PRODUCTION Market Value	OTHER ROYALTIES RECEIVED
1953-83	N/A	$ 1,917,811,651	$ 173,782,743
1984	N/A	317,582,106	47,136,756
1985	N/A	163,480,919	26,175,510
1986	N/A	154,523,045	24,576,166
1987	N/A	88,715,367	12,962,808
1988	N/A	157,306,523	19,316,494
1953-88	N/A	$ 2,799,419,611	$ 303,950,477

Table 13.--Summary of volume, market value, and royalties by area and year from OCS mineral leases, 1953-88 (cont.)

OFFSHORE TEXAS	OIL IN BARRELS Volume	OIL IN BARRELS Market Value	OIL ROYALTIES RECEIVED
1953-83	89,137,521	$ 1,954,827,175	$ 318,436,548
1984	21,960,086	644,586,996	103,778,515
1985	20,640,957	569,787,128	90,226,533
1986	19,835,882	330,215,223	51,175,234
1987	24,634,142	432,622,928	68,390,025
1988	26,115,776	406,007,277	61,042,482
1953-88	202,324,354	$ 4,338,046,727	$ 693,049,337

	GAS IN MCF Volume	GAS IN MCF Market Value	GAS ROYALTIES RECEIVED
1953-83	5,204,795,104	$ 9,498,228,693	$1,572,298,751
1984	931,293,582	3,083,711,594	522,884,515
1985	834,926,523	2,749,103,504	459,478,794
1986	978,370,552	2,383,174,819	414,710,941
1987	1,204,488,337	2,247,918,432	384,622,693
1988	1,178,422,561	2,147,898,236	375,221,062
1953-88	10,332,296,659	$22,110,035,278	$3,729,216,756

	OTHER PRODUCTION Volume	OTHER PRODUCTION Market Value	OTHER ROYALTIES RECEIVED
1953-83	N/A	$ 34,575,494	$ 3,477,854
1984	N/A	15,027,399	2,219,520
1985	N/A	(1,009,400)	(163,129)
1986	N/A	10,064,620	1,707,770
1987	N/A	7,177,760	1,166,293
1988	N/A	11,151,041	1,519,441
1953-88	N/A	$ 76,986,914	$ 9,927,749

Table 14.--Summary of volume, market value, and royalties by commodity and year from OCS mineral leases, 1953-88

	PRODUCTION VOLUME		
	OIL (bbl)	GAS (Mcf)	OTHER
1953-83	6,379,000,411	62,228,299,092	N/A
1984	370,239,014	4,537,841,051	N/A
1985	389,324,285	4,000,975,226	N/A
1986	389,216,004	3,948,891,837	N/A
1987	366,141,709	4,425,581,690	N/A
1988	320,667,424	4,309,874,827	N/A
1953-88	8,214,588,847	83,451,463,723	N/A

	MARKET VALUE		
	OIL (bbl)	GAS (Mcf)	OTHER
1953-83	$ 62,236,942,844	$ 62,949,773,206	$1,953,026,247
1984	10,828,992,755	12,839,297,031	333,156,337
1985	10,621,680,888	11,369,247,971	162,568,183
1986	6,429,066,605	9,117,507,291	164,587,665
1987	6,345,053,438	8,134,688,593	95,893,127
1988	4,814,904,938	7,946,040,609	168,566,388
1953-88	$101,276,641,468	$112,356,554,701	$2,877,797,947

	ROYALTIES RECEIVED		
	OIL (bbl)	GAS (Mcf)	OTHER
1953-83	$ 10,332,665,559	$ 10,270,288,529	$ 177,301,594
1984	1,823,447,844	2,091,276,753	49,456,076
1985	1,707,184,899	1,905,597,880	26,030,597
1986	1,015,037,703	1,518,338,984	26,283,936
1987	999,273,491	1,337,761,434	14,129,101
1988	747,454,359	1,310,301,872	20,845,382
1953-88	$ 16,625,063,855	$ 18,433,565,452	$ 314,046,686

Table 15.--Summary of minimum royalties by State or area from OCS mineral leases, 1957-88

	1957-84	1985	1986	1987	1988	1957-88
Alabama	$ ---	$ 34,038	$ 51,318	$ 101,859	$ 209,011	$ 396,226
Alaska	52,450	112,088	56,792	71,320	130,696	423,346
Atlantic States	73,728	---	---	---	---	73,728
California	1,325,048	451,785	445,015	434,917	646,162	3,302,927
Louisiana	35,961,015	2,139,530	3,199,547	19,239,027	8,727,373	69,266,492
Mississippi	---	---	---	15,594	32,874	48,468
Texas	9,191,759	1,329,880	1,423,936	1,536,615	7,076,705	20,558,895
TOTAL	$46,604,000	$4,067,321	$5,176,608	$21,399,332	$16,822,821	$94,070,082

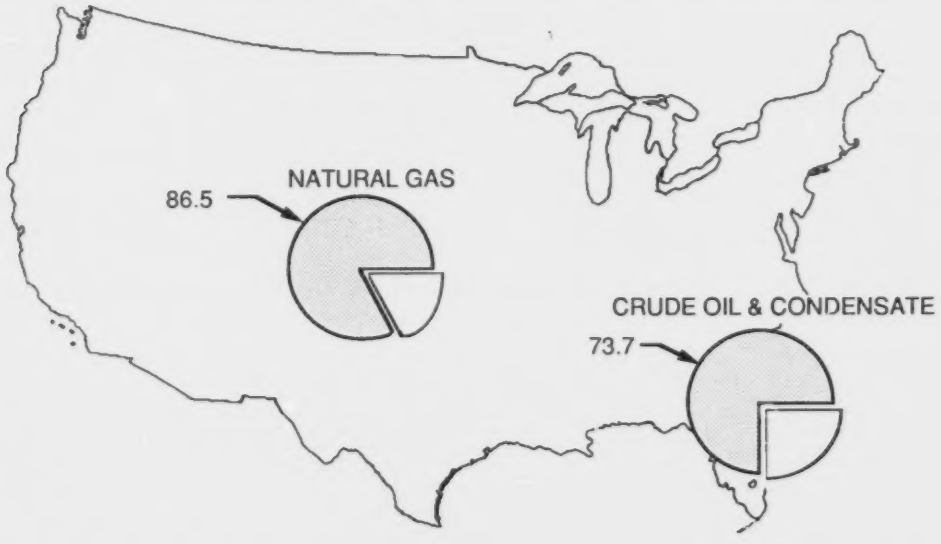


Figure 10. --- 1988 OCS royalties as percentages of total Federal and Indian royalties from oil and gas

Table 16.--Summary of rents by State or area from OCS mineral leases, 1953-88

	1953-84	1985	1986	1987	1988	1957-88
Alabama	$ 1,768,749	$ 340,409	$ 450,034	$ 548,601	$ 130,884	$ 3,238,677
Alaska	23,806,500	11,603,554	7,561,960	7,677,314	16,915,379	67,564,707
Atlantic States	29,843,796	2,359,296	1,993,729	1,757,182	1,308,672	37,262,675
California	27,443,309	1,995,694	1,862,983	1,848,659	1,130,759	34,281,404
Florida	8,708,185	1,269,924	138,240	---	278,607	10,394,956
Louisiana	201,296,419	33,756,447	34,110,029	52,115,828	35,752,757	357,031,480
Mississippi	550,851	334,681	103,257	138,240	17,280	1,144,309
Oregon	3,759,021	---	---	---	---	3,759,021
Texas	71,962,497	10,206,431	6,738,005	10,556,888	5,640,007	105,103,828
Washington	1,399,080	---	---	---	---	1,399,080
TOTAL	$370,538,407	$61,866,436	$52,958,237	$74,642,712	$61,174,345	$621,180,137

Table 17.--1988 bonuses paid on lease sales of OCS oil & gas tracts by area

	Sale No.	Sale Date	Tracts Leased	Acres Leased	Bonuses Paid
ALASKA					
Beaufort Sea	97	03/16/88	202	1,110,764	$114,631,636
Chukchi Sea	109	05/25/88	350	1,976,912	478,032,631
N. Aleutian Basin	92	10/11/88	23	121,754	95,439,500
ATLANTIC	**NO LEASING ACTIVITY**				
GULF OF MEXICO					
Central*	55	02/24/88	14	142,685	15,149,327
Central	113	03/30/88	662	3,416,716	388,730,457
Western	115	08/31/88	255	1,412,764	125,352,889
Eastern	116	11/16/88	17	92,868	6,415,734
PACIFIC	**NO LEASING ACTIVITY**				
		TOTAL	1,523	8,274,463	$1,223,752,174

*Salt and sulfur lease sale.

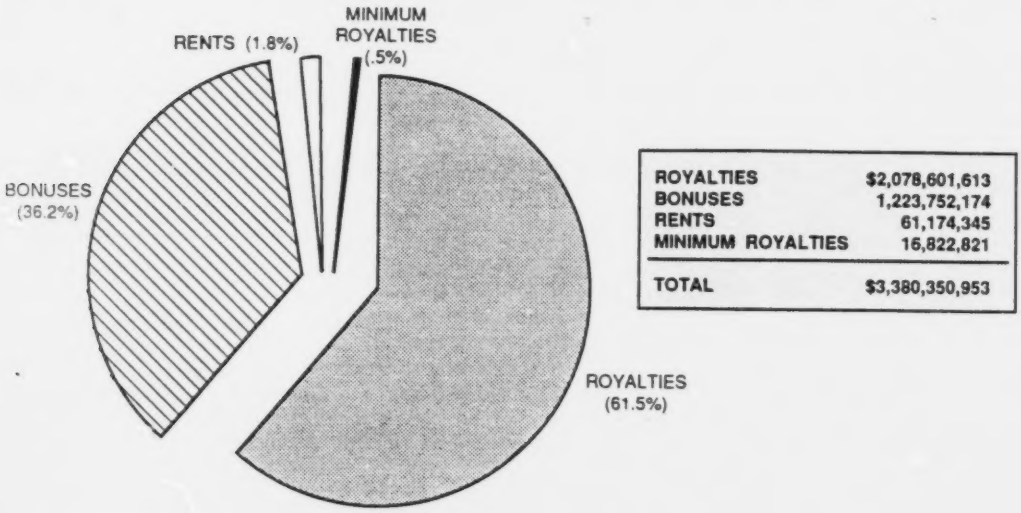


Figure 11. --- 1988 revenues from OCS mineral leases by source

Table 18.--Summary of bonuses paid on lease sales of OCS oil & gas tracts, 1954-88

Year	No. of Sales	Tracts Leased	Acres Leased	Bonuses Paid
1954*	3	114	486,870	$ 140,969,005
1955	1	121	402,567	108,528,726
1959	2	42	171,300	89,746,992
1960**	2	148	707,026	282,717,065
1962	3	420	1,929,177	489,481,061
1963	1	57	312,945	12,807,337
1964	2	124	613,524	95,874,327
1965*	1	50	72,000	33,740,309
1966	3	42	141,768	209,199,893
1967**	2	159	746,951	510,109,742
1968	3	197	934,164	1,346,487,097
1969*	3	40	114,282	111,660,685
1970	2	138	598,540	945,064,773
1971	1	11	37,222	96,304,523
1972	2	178	826,195	2,251,347,556
1973	2	187	1,032,570	3,082,462,611
1974	4	356	1,762,158	5,022,860,815
1975	4	321	1,679,877	1,088,133,152
1976	4	246	1,277,937	2,242,898,467
1977	2	211	1,100,734	1,568,564,745
1978	4	249	1,297,274	1,767,042,064
1979	6	351	1,767,443	5,078,861,692
1980	3	218	1,134,227	4,204,640,257
1981	7	430	2,265,537	6,652,980,897
1982	5	357	1,886,360	3,987,490,009
1983	7	1,251	6,587,823	5,749,016,369
1984	6	1,387	7,397,939	3,928,876,308
1985	3	670	3,529,323	1,543,577,714
1986	2	142	734,418	187,094,747
1987	2	640	3,447,809	497,247,006
1988***	7	1,523	8,274,463	1,223,752,174
TOTAL	99	10,380	53,270,423	$54,549,538,118

*Sales include one sulfur lease.
**Sales include one salt lease.
***Sales include one salt and sulfur lease.

ONSHORE FEDERAL MINERAL REVENUES

Revenues from royalties, minimum royalties, rents, and bonuses from Federal onshore lands dropped 1 percent, from $793 million in 1987 to $785 million in 1988 (tables 1 and 2). The decline is attributed to the fall in oil prices during the year. Over 80 percent of revenues from Federal onshore mineral leases were derived from royalties (figure 13).

Oil production on Federal lands fell 7.3 percent in 1988; however, royalty revenues dropped 20 percent, or $58.2 million, from $289.1 million in 1987 to $230.9 million in 1988 (figure 12 and table 19). Collections in oil-producing States, including California, Colorado, New Mexico, North Dakota, Utah, and Wyoming, experienced significant reductions (table 19). The reduction in royalties is associated with a decline in production caused by falling oil prices during the period. Wyoming produced nearly half the oil from Federal lands in 1988 (figure 15).

Onshore gas production rose 1.6 percent during the year, while gas royalties dropped 1 percent, from $183.9 million in 1987 to $182 million in 1988 (figure 12 and table 19). The decline in gas revenues in Alaska and Wyoming was particularly acute. In contrast, New Mexico realized a $3 million increase in gas royalty receipts (table 19). The overall decline in royalties is attributed to the continued glut in the supply of gas on the open market. New Mexico and Wyoming produced 80 percent of the gas from Federal onshore leases in 1988 (figure 16).

Coal production jumped 16.4 percent in 1988. Coal royalties rose a corresponding 13.3 percent, or $20.3 million, from $152.5 million in 1987 to $172.8 million in 1988 (figure 12 and table 19). The sustained drought in Canada and the United States in 1988 reduced hydroelectric power production, particularly in the western sections of both nations. Public utilities increased coal consumption to offset the loss in hydroelectric resources. Wyoming produced nearly 75 percent of the coal from Federal leases during the period (figure 17).

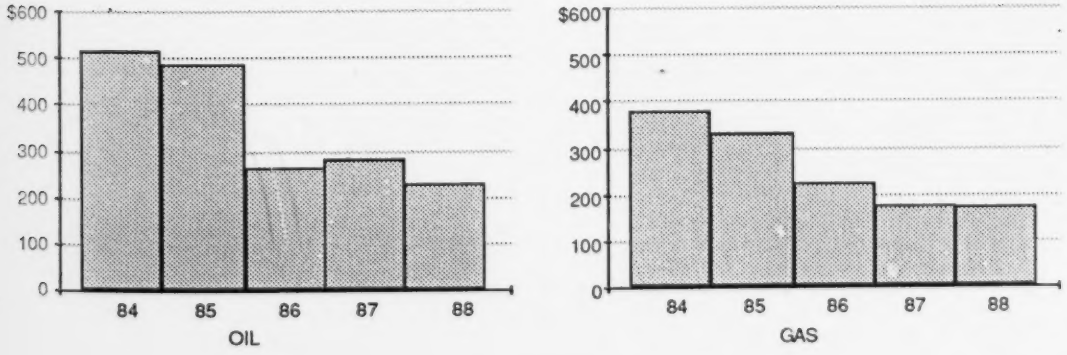


Figure 12. --- Royalties, in millions, from Federal onshore mineral leases, 1984-1988

Coal mining operation. (Photo courtesy Pittsburgh & Midway Coal Mining Co.)

Royalties from mineral resources other than oil, gas, and coal rose $6.9 million, from $56.9 million in 1987 to $63.8 million in 1988 (figure 12 and table 19). There were significant increases in royalties from copper, gas plant products, lead, phosphate, potash, and sodium. This was offset, in part, by reductions in revenues from carbon dioxide and geothermal energy sources (table 20). Carbon dioxide, gas plant products, geothermal energy, and sodium generated more than 75 percent of the royalties from other mineral commodities during the year.

Minimum royalty collections dropped 21.5 percent, from $14.4 million in 1987 to $11.3 million in 1988. The decline was particularly evident in Colorado, Montana, and New Mexico (table 21).

Rent receipts increased $3.4 million, from $61.4 million in 1987 to $64.8 million in 1988. The majority of States experienced a slight reduction in revenues; however, this was offset by a significant increase in receipts in Nevada and Wyoming (table 22).

Competitive mineral leasing for Federal onshore lands soared 178 percent, from 900 leases in 1987 to 2,503 leases in 1989. The number of competitive oil and gas leases issued increased by 1,574, from 890 leases in 1987 to 2,464 leases in 1988. Bonus revenues generated from oil and gas lease sales rose 53.6 percent, or nearly $17.9 million, from $33.3 million in 1987 to $51.2 million in 1988. Significant oil and gas bonus increases were recorded in Colorado, Nevada, New Mexico, Utah, and Wyoming. Competitive geothermal leases were issued in California, Nevada, and Utah, producing over $3.4 million in bonus revenues (tables 23 and 24).

Onshore royalty-in-kind (RIK) oil royalties increased $11.3 million, from $83 million in 1987 to $94.3 million in 1988. RIK revenues in 1988, however, remain well below royalty figures in 1984-85, when oil prices were high and crude oil supplies were limited (table 30).

Mineral production in Wyoming and New Mexico continued to dominate onshore Federal lease activity (table 19). The two States collectively received 64.3 percent of the $398 million disbursed to 29 States during the year (figure 20 and table 27).

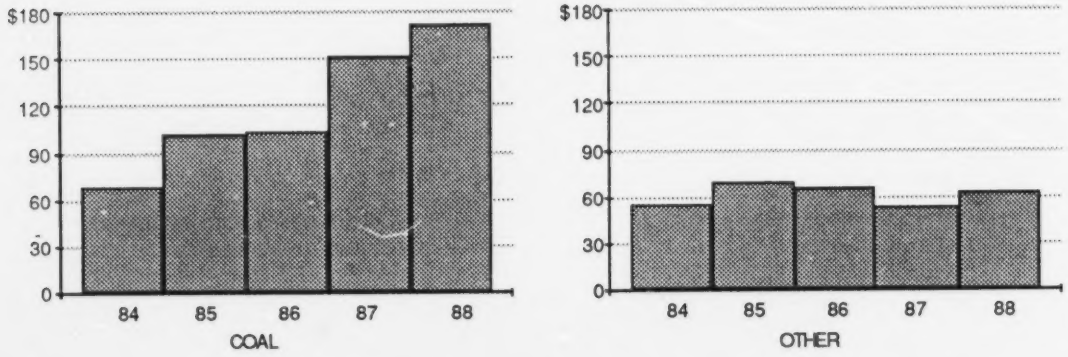
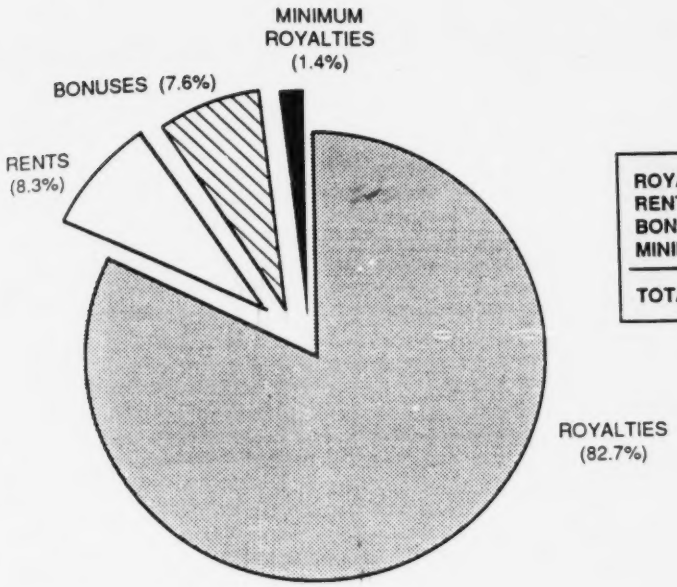


Figure 12. --- Royalties, in millions, from Federal onshore mineral leases, 1984-1988 (continued)



ROYALTIES	$649,534,932
RENTS	64,810,845
BONUSES	59,394,838
MINIMUM ROYALTIES	11,279,396
TOTAL	$785,020,011

Figure 13. --- 1988 revenues from Federal onshore mineral leases by source

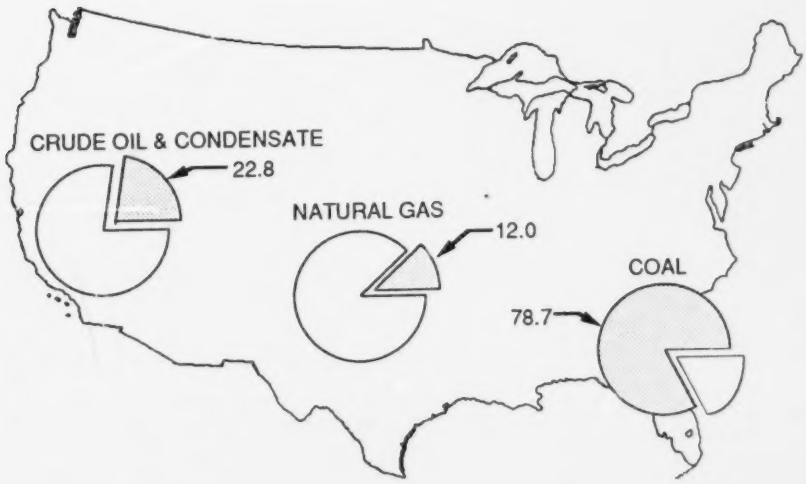


Figure 14. --- 1988 Federal onshore royalties as percentages of total Federal and Indian royalties from oil, gas, and coal

Table 19.--Summary of volume, market value, and royalties by State and commodity from Federal onshore mineral leases, 1920-88

	1920-83	1984	1985	1986	1987	1988	1920-88
ALABAMA							
OIL IN BARRELS							
Volume	514,550	18,578	51,190	97,723	19,500	31,535	733,076
Market Value $	2,262,098 $	536,018 $	1,421,449 $	1,697,511 $	51,490 $	484,215 $	6,452,781
Royalties $	293,235 $	67,023 $	169,282 $	160,195 $	89,868 $	106,374 $	885,977
GAS IN MCF							
Volume	159,081	170,213	245,457	284,485	(32,355)	124,892	951,773
Market Value $	406,837 $	649,312 $	792,608 $	536,224 $	(41,043)$	197,627 $	2,541,565
Royalties $	51,133 $	81,165 $	99,004 $	46,416 $	(4,971)$	24,737 $	297,484
COAL IN TONS							
Volume	1,792,796	23,197	0	0	0	0	1,815,993
Market Value $	11,140,605 $	1,016,025 $	0 $	0 $	0 $	0 $	12,156,630
Royalties $	501,868 $	40,641 $	0 $	0 $	0 $	0 $	542,509
OTHER PRODUCTS							
Market Value $	173,815 $	14,150 $	7,029 $	12,129 $	657 $	699 $	208,479
Royalties $	12,441 $	2,968 $	1,731 $	2,534 $	260 $	279 $	20,213
TOTAL ROYALTIES							
ALL MINERALS $	858,677 $	191,797 $	270,017 $	209,145 $	85,157 $	131,390 $	1,746,183

	1920-83	1984	1985	1986	1987	1988	1920-88
ALASKA							
OIL IN BARRELS							
Volume	201,275,159	1,757,541	1,642,880	1,531,448	1,375,912	739,102	208,322,042
Market Value $	998,891,870 $	44,605,543 $	40,204,022 $	21,920,806 $	22,087,643 $	10,972,761 $	1,138,682,645
Royalties $	120,463,934 $	5,557,160 $	5,004,348 $	2,720,962 $	2,737,168 $	1,359,683 $	137,843,255
GAS IN MCF							
Volume	1,103,915,798	76,556,222	63,418,259	50,137,932	47,085,856	28,776,378	1,369,890,445
Market Value $	529,900,661 $	55,120,480 $	83,209,227 $	77,629,588 $	57,790,567 $	35,970,473 $	839,620,996
Royalties $	65,345,266 $	6,890,060 $	10,918,247 $	10,901,543 $	8,224,121 $	4,496,309 $	106,775,546
COAL IN TONS							
Volume	18,376,127	0	0	0	0	0	18,376,127
Market Value $	131,760,234 $	0 $	0 $	0 $	0 $	0 $	131,760,234
Royalties $	2,075,108 $	0 $	0 $	0 $	0 $	0 $	2,075,108
OTHER PRODUCTS							
Market Value $	5,576,191 $	941,066 $	1,453,224 $	592,698 $	868,799 $	460,133 $	9,892,111
Royalties $	683,250 $	117,664 $	181,942 $	74,087 $	108,515 $	57,234 $	1,222,692
TOTAL ROYALTIES							
ALL MINERALS $	188,567,558 $	12,564,884 $	16,104,537 $	13,696,592 $	11,069,804 $	5,913,226 $	247,916,601

*Beginning in 1984, data do not include minerals production or royalty revenues from any lands that have been transferred to Alaska Natives.

Table 19.--Summary of volume, market value, and royalties by State and commodity from Federal onshore mineral leases, 1920-88 (cont.)

	1920-83	1984	1985	1986	1987	1988	1920-88
ARIZONA							
GAS IN MCF							
Volume	124,822	0	0	0	0	0	124,822
Market Value $	62,572 $	0 $	0 $	0 $	0 $	0 $	62,572
Royalties $	37,551 $	0 $	0 $	0 $	0 $	0 $	37,551
OTHER PRODUCTS							
Market Value $	8,004,634 $	0 $	0 $	0 $	0 $	0 $	8,004,634
Royalties $	519,428 $	0 $	0 $	0 $	0 $	0 $	519,428
TOTAL ROYALTIES							
ALL MINERALS $	556,979 $	0 $	0 $	0 $	0 $	0 $	556,979

	1920-83	1984	1985	1986	1987	1988	1920-88
ARKANSAS							
OIL IN BARRELS							
Volume	49,116	121	609	3,705	2,479	985	57,015
Market Value $	175,229 $	3,267 $	15,250 $	56,403 $	40,952 $	14,690 $	305,791
Royalties $	25,447 $	488 $	1,903 $	6,945 $	5,124 $	1,836 $	41,663
GAS IN MCF							
Volume	58,283,707	5,373,582	5,649,655	5,018,855	5,244,438	7,165,772	86,732,219
Market Value $	64,272,462 $	16,233,502 $	17,526,046 $	13,774,736 $	11,658,965 $	14,268,539 $	137,734,250
Royalties $	8,837,077 $	1,973,767 $	2,317,4[illegible] $	1,797,837 $	1,505,415 $	1,865,054 $	18,296,607
OTHER PRODUCTS							
Market Value $	1,727,164 $	12,758 $	28,317 $	35,209 $	113,558 $	218,306 $	2,135,312
Royalties $	63,692 $	637 $	1,416 $	1,760 $	5,203 $	11,036 $	83,744
TOTAL ROYALTIES							
ALL MINERALS $	8,926,216 $	1,974,812 $	2,320,776 $	1,806,542 $	1,515,742 $	1,877,926 $	18,422,014

Table 19.--Summary of volume, market value, and royalties by State and commodity from Federal onshore mineral leases, 1920-88 (cont.)

	1920-83	1984	1985	1986	1987	1988	1920-88
CALIFORNIA							
OIL IN BARRELS							
Volume	1,323,544,271	20,065,310	24,710,939	20,826,447	19,884,609	18,712,811	1,427,744,387
Market Value	$ 4,899,227,010	$ 427,536,380	$ 528,544,151	$ 252,362,151	$ 257,417,946	$ 194,252,318	$ 6,559,339,956
Royalties	$ 592,576,739	$ 53,446,459	$ 55,194,237	$ 30,908,583	$ 31,791,870	$ 23,950,409	$ 787,868,297
GAS IN MCF							
Volume	1,592,329,905	8,770,616	6,111,398	6,524,243	5,156,771	4,174,018	1,623,066,951
Market Value	$ 343,781,911	$ 30,753,749	$ 18,960,223	$ 15,239,086	$ 10,174,615	$ 7,556,939	$ 426,466,523
Royalties	$ 60,944,321	$ 3,718,648	$ 4,041,505	$ 3,065,423	$ 2,126,547	$ 1,656,985	$ 75,553,429
COAL IN TONS							
Volume	1,257	0	0	0	0	0	1,257
Markey Value	$ 3,190	$ 0	$ 0	$ 0	$ 0	$ 0	$ 3,190
Royalties	$ 299	$ 0	$ 0	$ 0	$ 0	$ 0	$ 299
OTHER PRODUCTS							
Market Value	$ 1,827,118,040	$ 180,457,994	$ 209,134,018	$ 237,903,911	$ 215,299,231	$ 218,097,810	$ 2,888,011,004
Royalties	$ 86,841,141	$ 14,664,423	$ 18,735,036	$ 22,042,944	$ 19,188,719	$ 18,474,034	$ 179,946,299
TOTAL ROYALTIES							
ALL MINERALS	$ 740,362,500	$ 71,829,530	$ 77,970,780	$ 56,016,950	$ 53,107,136	$ 44,081,428	$ 1,043,368,324

	1920-83	1984	1985	1986	1987	1988	1920-88
COLORADO							
OIL IN BARRELS							
Volume	480,630,885	9,344,013	7,860,164	7,412,090	8,102,745	7,919,326	521,269,223
Market Value	$ 2,704,140,015	$ 258,485,907	$ 198,790,675	$ 107,539,629	$ 141,216,844	$ 118,782,823	$ 3,528,955,893
Royalties	$ 437,922,413	$ 41,003,709	$ 33,712,986	$ 16,629,286	$ 21,440,859	$ 17,397,637	$ 568,106,890
GAS IN MCF							
Volume	1,216,817,012	60,598,213	54,625,792	44,469,099	37,251,492	38,942,606	1,452,704,214
Market Value	$ 674,337,173	$ 150,766,403	$ 145,418,918	$ 106,678,570	$ 63,616,259	$ 63,152,510	$ 1,203,969,833
Royalties	$ 81,414,725	$ 18,122,573	$ 16,010,584	$ 13,707,153	$ 7,064,882	$ 7,827,994	$ 144,147,911
COAL IN TONS							
Volume	105,103,165	11,735,302	9,785,279	10,296,466	6,922,458	8,992,859	152,835,529
Market Value	$ 1,484,012,358	$ 266,743,414	$ 246,710,955	$ 194,789,903	$ 173,920,774	$ 183,596,741	$ 2,549,774,145
Royalties	$ 60,532,189	$ 15,170,851	$ 14,727,801	$ 20,737,812	$ 14,780,341	$ 12,146,642	$ 138,095,636
OTHER PRODUCTS							
Market Value	$ 91,671,649	$ 48,104,935	$ 110,046,454	$ 104,686,185	$ 85,326,453	$ 115,312,912	$ 555,148,588
Royalties	$ 5,680,243	$ 5,692,273	$ 13,174,761	$ 12,544,583	$ 10,489,745	$ 9,346,251	$ 56,927,856
TOTAL ROYALTIES							
ALL MINERALS	$ 585,549,570	$ 79,989,406	$ 77,626,132	$ 63,618,834	$ 53,775,827	$ 46,718,524	$ 907,278,293

Table 19.--Summary of volume, market value, and royalties by State and commodity from Federal onshore mineral leases, 1920-88 (cont.)

	1920-83	1984	1985	1986	1987	1988	1920-88
FLORIDA							
OIL IN BARRELS							
Volume	8,166	0	0	25,384	21,906	41,466	96,922
Market Value $	107,283 $	0 $	0 $	360,374 $	387,618 $	652,781 $	1,508,056
Royalties $	13,411 $	0 $	0 $	45,047 $	48,452 $	81,597 $	188,507
OTHER PRODUCTS							
Market Value $	22,585,717 $	5,951,727 $	4,129,622 $	1,621,856 $	4,368 $	0 $	34,293,290
Royalties $	1,140,660 $	297,721 $	206,482 $	81,093 $	218 $	0 $	1,726,174
TOTAL ROYALTIES							
ALL MINERALS $	1,154,071 $	297,721 $	206,482 $	126,140 $	48,670 $	81,597 $	1,914,681

	1920-83	1984	1985	1986	1987	1988	1920-88
GEORGIA							
OTHER PRODUCTS							
Market Value $	3,175,603 $	10,014 $	0 $	0 $	0 $	136 $	3,185,753
Royalties $	121,809 $	495 $	0 $	0 $	0 $	7 $	122,311
TOTAL ROYALTIES							
ALL MINERALS $	121,809 $	495 $	0 $	0 $	0 $	7 $	122,311

	1920-83	1984	1985	1986	1987	1988	1920-88
IDAHO							
COAL IN TONS							
Volume	31,574	0	0	0	0	0	31,574
Market Value $	88,984 $	0 $	0 $	0 $	0 $	0 $	88,984
Royalties $	7,228 $	0 $	0 $	0 $	0 $	0 $	7,228
OTHER PRODUCTS							
Market Value $	368,146,976 $	62,331,421 $	65,377,357 $	35,637,173 $	44,559,403 $	45,515,100 $	621,567,430
Royalties $	22,012,860 $	3,125,387 $	3,220,911 $	1,751,236 $	2,227,493 $	3,144,387 $	35,481,874
TOTAL ROYALTIES							
ALL MINERALS $	22,019,688 $	3,125,387 $	3,220,911 $	1,751,236 $	2,227,493 $	3,144,387 $	35,489,102

Table 19.--Summary of volume, market value, and royalties by State and commodity from Federal onshore mineral leases, 1920-88 (cont.)

	1920-83	1984	1985	1986	1987	1988	1920-88
ILLINOIS							
OIL IN BARRELS							
Volume	810	92	0	0	0	14,539	15,441
Market Value $	14,312 $	2,666 $	0 $	0 $	0 $	218,517 $	235,495
Royalties $	2,385 $	444 $	0 $	0 $	0 $	27,315 $	30,144
COAL IN TONS							
Volume	24,170	0	0	0	0	0	24,170
Market Value $	92,128 $	0 $	0 $	0 $	0 $	0 $	92,128
Royalties $	3,138 $	0 $	0 $	0 $	0 $	0 $	3,138
OTHER PRODUCTS							
Market Value $	21,708,596 $	550,124 $	1,342,175 $	761,008 $	0 $	136,315 $	24,498,218
Royalties $	894,593 $	24,966 $	62,222 $	37,367 $	0 $	6,135 $	1,025,283
TOTAL ROYALTIES							
ALL MINERALS $	900,116 $	25,410 $	62,222 $	37,367 $	0 $	33,450 $	1,058,565

	1920-83	1984	1985	1986	1987	1988	1920-88
INDIANA							
OIL IN BARRELS							
Volume	5,679	0	0	0	0	0	5,679
Market Value $	15,529 $	0 $	0 $	0 $	0 $	0 $	15,529
Royalties $	1,859 $	0 $	0 $	0 $	0 $	0 $	1,859
TOTAL ROYALTIES							
ALL MINERALS $	1,859 $	0 $	0 $	0 $	0 $	0 $	1,859

	1920-83	1984	1985	1986	1987	1988	1920-88
KANSAS							
OIL IN BARRELS							
Volume	15,678,160	274,083	247,873	230,237	256,019	334,921	17,021,293
Market Value $	86,612,363 $	7,815,363 $	6,285,339 $	3,551,778 $	4,353,871 $	5,139,298 $	113,758,012
Royalties $	11,678,258 $	1,026,721 $	820,524 $	455,244 $	562,244 $	675,791 $	15,218,782
GAS IN MCF							
Volume	380,521,467	(2,545,546)	8,005,106	7,901,163	7,710,397	10,958,785	412,551,372
Market Value $	107,846,720 $	(3,928,956)$	10,094,042 $	8,950,958 $	9,906,102 $	15,313,237 $	148,182,103
Royalties $	13,416,177 $	851,847 $	1,098,029 $	1,005,418 $	1,209,138 $	1,910,998 $	19,491,607
OTHER PRODUCTS							
Market Value $	5,017 $	214,998 $	257,123 $	171,039 $	85,971 $	269,096 $	1,003,244
Royalties $	302 $	26,875 $	32,141 $	21,380 $	10,747 $	32,078 $	123,523
TOTAL ROYALTIES							
ALL MINERALS $	25,094,737 $	1,905,443 $	1,950,694 $	1,482,042 $	1,782,129 $	2,618,867 $	34,833,912

Table 19.--Summary of volume, market value, and royalties by State and commodity from Federal onshore mineral leases, 1920-88 (cont.)

	1920-83	1984	1985	1986	1987	1988	1920-88
KENTUCKY							
OIL IN BARRELS							
Volume	2,996,309	5,529	4,317	4,076	4,400	5,721	3,020,352
Market Value $	10,208,223 $	159,319 $	116,369 $	62,899 $	75,910 $	86,173 $	10,708,893
Royalties $	1,524,156 $	23,247 $	17,455 $	9,435 $	11,304 $	12,693 $	1,598,290
GAS IN MCF							
Volume	1,646,532	378,124	372,860	329,613	290,100	239,215	3,256,444
Market Value $	2,036,259 $	1,129,051 $	1,113,536 $	1,014,076 $	878,675 $	679,766 $	6,851,363
Royalties $	238,872 $	140,872 $	139,061 $	139,669 $	109,834 $	84,971 $	853,279
COAL IN TONS							
Volume	2,994,873	0	0	0	0	238,423	3,233,296
Market Value $	26,007,368 $	0 $	0 $	0 $	0 $	6,023,729 $	32,031,097
Royalties $	1,007,063 $	0 $	0 $	0 $	0 $	484,153 $	1,491,216
TOTAL ROYALTIES							
ALL MINERALS $	2,770,091 $	164,119 $	156,516 $	149,104 $	121,138 $	581,817 $	3,942,785

	1920-83	1984	1985	1986	1987	1988	1920-88
LOUISIANA							
OIL IN BARRELS							
Volume	152,913,250	1,497,969	1,304,169	1,349,207	1,430,544	1,051,275	159,546,414
Market Value $	696,470,879 $	44,239,467 $	36,128,522 $	22,282,197 $	25,395,129 $	16,531,624 $	841,047,818
Royalties $	83,234,246 $	5,572,088 $	3,804,766 $	2,345,337 $	2,786,851 $	1,847,756 $	99,591,044
GAS IN MCF							
Volume	1,463,210,903	15,064,559	11,883,842	11,491,304	11,871,768	12,651,360	1,526,173,736
Market Value $	329,421,335 $	19,262,162 $	14,819,881 $	15,784,151 $	18,288,763 $	20,234,725 $	417,811,017
Royalties $	46,786,173 $	2,478,550 $	1,962,708 $	2,161,330 $	2,657,402 $	2,814,206 $	58,860,369
OTHER PRODUCTS							
Market Value $	66,959,060 $	6,210,495 $	4,455,942 $	2,830,003 $	2,568,431 $	3,191,890 $	86,215,821
Royalties $	10,523,745 $	867,694 $	659,450 $	422,089 $	382,218 $	390,145 $	13,245,341
TOTAL ROYALTIES							
ALL MINERALS $	140,544,164 $	8,918,332 $	6,426,924 $	4,928,756 $	5,826,471 $	5,052,107 $	171,696,754

	1920-83	1984	1985	1986	1987	1988	1920-88
MAINE							
OTHER PRODUCTS							
Market Value $	9,711 $	0 $	0 $	0 $	0 $	0 $	9,711
Royalties $	818 $	0 $	0 $	0 $	0 $	0 $	818
TOTAL ROYALTIES							
ALL MINERALS $	818 $	0 $	0 $	0 $	0 $	0 $	818

Table 19.--Summary of volume, market value, and royalties by State and commodity from Federal onshore mineral leases, 1920-88 (cont.)

	1920-83	1984	1985	1986	1987	1988	1920-88
MARYLAND							
GAS IN MCF							
Volume	3,811,845	991	10,055	255	10,439	6,391	3,839,976
Market Value $	1,059,023 $	2,168 $	5,991 $	179 $	6,263 $	4,026 $	1,077,650
Royalties $	133,118 $	271 $	749 $	22 $	783 $	503 $	135,446
TOTAL ROYALTIES							
ALL MINERALS $	133,118 $	271 $	749 $	22 $	783 $	503 $	135,446

	1920-83	1984	1985	1986	1987	1988	1920-88
MICHIGAN							
OIL IN BARRELS							
Volume	1,329,944	160,758	135,897	107,167	106,356	99,248	1,939,370
Market Value $	15,259,934 $	3,951,348 $	3,528,948 $	1,732,404 $	1,864,759 $	1,500,129 $	27,837,522
Royalties $	1,976,581 $	749,819 $	421,155 $	215,187 $	235,682 $	192,311 $	3,790,735
GAS IN MCF							
Volume	6,268,037	903,731	617,155	1,353,655	1,623,534	3,009,380	13,775,492
Market Value $	9,341,839 $	3,319,056 $	2,293,730 $	4,324,905 $	3,467,968 $	7,266,218 $	30,013,716
Royalties $	1,219,157 $	345,223 $	286,528 $	256,407 $	433,496 $	918,799 $	3,459,610
OTHER PRODUCTS							
Market Value $	4,659 $	193,845 $	8,976 $	0 $	91,189 $	260,012 $	558,681
Royalties $	470 $	27,400 $	2,400 $	0 $	11,399 $	28,928 $	70,597
TOTAL ROYALTIES							
ALL MINERALS $	3,196,208 $	1,122,442 $	710,083 $	471,594 $	680,577 $	1,140,038 $	7,320,942

	1920-83	1984	1985	1986	1987	1988	1920-88
MINNESOTA							
OTHER PRODUCTS							
Market Value $	5,230,986 $	1,405,665 $	4,651,525 $	1,551,047 $	9,976,173 $	354,396 $	23,169,792
Royalties $	197,369 $	58,018 $	190,425 $	62,249 $	399,047 $	11,579 $	918,687
TOTAL ROYALTIES							
ALL MINERALS $	197,369 $	58,018 $	190,425 $	62,249 $	399,047 $	11,579 $	918,687

Table 19.--Summary of volume, market value, and royalties by State and commodity from Federal onshore mineral leases, 1920-88 (cont.)

	1920-83	1984	1985	1986	1987	1988	1920-88
MISSISSIPPI							
OIL IN BARRELS							
Volume	50,309,848	594,180	777,449	711,049	624,285	586,271	53,603,082
Market Value $	257,200,549 $	24,083,902 $	20,576,378 $	11,114,638 $	10,947,451 $	8,787,621 $	332,710,539
Royalties $	31,755,917 $	3,005,419 $	2,534,595 $	1,382,318 $	1,336,905 $	1,089,164 $	41,104,318
GAS IN MCF							
Volume	74,942,920	5,942,604	3,123,495	1,563,483	1,272,244	997,437	87,842,183
Market Value $	22,667,262 $	24,051,737 $	9,952,787 $	3,439,163 $	2,246,777 $	1,963,853 $	64,321,579
Royalties $	3,685,526 $	2,806,365 $	1,233,003 $	410,064 $	288,934 $	243,580 $	8,667,472
OTHER PRODUCTS							
Market Value $	410,529 $	794 $	0 $	786 $	0 $	0 $	412,109
Royalties $	12,536 $	646 $	0 $	98 $	0 $	0 $	13,280
TOTAL ROYALTIES							
ALL MINERALS $	35,453,979 $	5,812,430 $	3,767,598 $	1,792,480 $	1,625,839 $	1,332,744 $	49,785,070

	1920-83	1984	1985	1986	1987	1988	1920-88
MISSOURI							
OTHER PRODUCTS							
Market Value $	1,842,019,820 $	100,661,451 $	102,507,648 $	86,744,209 $	143,106,308 $	211,387,268 $	2,486,426,704
Royalties $	85,080,616 $	3,750,857 $	2,440,816 $	2,678,417 $	4,460,895 $	6,852,151 $	105,263,752
TOTAL ROYALTIES							
ALL MINERALS $	85,080,616 $	3,750,857 $	2,440,816 $	2,678,417 $	4,460,895 $	6,852,151 $	105,263,752

	1920-83	1984	1985	1986	1987	1988	1920-88
MONTANA							
OIL IN BARRELS							
Volume	269,616,750	5,202,388	4,910,149	4,606,038	4,209,570	3,839,065	292,383,960
Market Value $	1,428,247,888 $	148,952,661 $	124,648,794 $	68,412,176 $	68,223,406 $	53,578,775 $	1,892,063,700
Royalties $	177,654,517 $	17,339,637 $	14,502,103 $	7,548,159 $	7,665,880 $	6,092,168 $	230,802,464
GAS IN MCF							
Volume	301,036,509	18,266,587	11,267,984	11,099,365	14,968,968	8,390,794	365,030,207
Market Value $	139,797,066 $	41,203,622 $	20,555,209 $	25,350,887 $	20,074,876 $	16,482,316 $	263,463,976
Royalties $	16,296,512 $	3,238,169 $	2,521,743 $	2,588,170 $	2,504,588 $	2,053,674 $	29,202,856
COAL IN TONS							
Volume	140,670,799	18,696,290	21,180,897	24,681,884	21,012,476	20,626,026	246,868,372
Market Value $	1,106,258,691 $	289,792,495 $	297,466,328 $	311,291,759 $	332,226,077 $	297,352,200 $	2,634,387,550
Royalties $	37,425,488 $	9,708,668 $	15,173,896 $	22,446,731 $	39,110,631 $	35,591,525 $	159,456,939
OTHER PRODUCTS							
Market Value $	92,127,793 $	3,187,109 $	3,566,374 $	3,611,735 $	1,765,660 $	2,163,440 $	106,422,111
Royalties $	3,439,620 $	422,104 $	311,082 $	351,316 $	197,388 $	147,541 $	4,869,051
TOTAL ROYALTIES							
ALL MINERALS $	234,816,137 $	30,708,578 $	32,508,824 $	32,934,376 $	49,478,487 $	43,884,908 $	424,331,310

Table 19.--Summary of volume, market value, and royalties by State and commodity from Federal onshore mineral leases, 1920-88 (cont.)

	1920-83	1984	1985	1986	1987	1988	1920-88
NEBRASKA							
OIL IN BARRELS							
Volume	1,267,271	139,728	158,069	146,834	122,168	102,534	1,936,604
Market Value $	21,093,051 $	4,122,435 $	4,091,035 $	2,178,793 $	2,114,735 $	1,558,588 $	35,158,637
Royalties $	2,600,591 $	553,226 $	488,653 $	269,628 $	261,912 $	195,469 $	4,369,479
GAS IN MCF							
Volume	10,519,789	294,807	346,366	7,009	0	0	11,167,971
Market Value $	6,622,475 $	391,900 $	416,806 $	10,760 $	0 $	0 $	7,441,941
Royalties $	1,093,933 $	58,141 $	71,646 $	1,837 $	0 $	0 $	1,225,557
OTHER PRODUCTS							
Market Value $	4,231,663 $	212,647 $	106,661 $	2,743 $	(22,525)$	0 $	4,531,189
Royalties $	326,948 $	26,585 $	17,777 $	457 $	(3,754)$	0 $	368,013
TOTAL ROYALTIES							
ALL MINERALS $	4,021,472 $	637,952 $	578,076 $	271,922 $	258,158 $	195,469 $	5,963,049

	1920-83	1984	1985	1986	1987	1988	1920-88
NEVADA							
OIL IN BARRELS							
Volume	8,599,329	1,553,498	3,108,782	2,787,446	3,145,419	3,167,416	22,361,890
Market Value $	89,327,213 $	30,602,759 $	58,540,986 $	26,583,769 $	33,277,960 $	28,308,323 $	266,641,010
Royalties $	11,138,896 $	3,825,346 $	7,317,621 $	3,345,201 $	4,159,745 $	3,539,249 $	33,326,058
COAL IN TONS							
Volume	141	0	0	0	0	0	141
Market Value $	207 $	0 $	0 $	0 $	0 $	0 $	207
Royalties $	133 $	0 $	0 $	0 $	0 $	0 $	133
OTHER PRODUCTS							
Market Value $	33,304,488 $	1,572,244 $	2,146,345 $	5,038,088 $	7,010,370 $	15,136,327 $	64,207,862
Royalties $	29,775 $	111,903 $	127,384 $	314,085 $	510,909 $	1,186,001 $	2,280,057
TOTAL ROYALTIES							
ALL MINERALS $	11,168,804 $	3,937,249 $	7,445,005 $	3,659,286 $	4,670,654 $	4,725,250 $	35,606,248

Table 19.--Summary of volume, market value, and royalties by State and commodity from Federal onshore mineral leases, 1920-88 (cont.)

	1920-83	1984	1985	1986	1987	1988	1920-88
NEW MEXICO							
OIL IN BARRELS							
Volume	1,065,605,984	19,611,110	22,590,428	23,104,610	21,840,599	21,093,314	1,173,846,045
Market Value	$ 6,019,475,788	$ 553,609,916	$ 604,490,924	$ 368,929,611	$ 372,487,190	$ 318,057,953	$ 8,237,051,382
Royalties	$ 734,847,372	$ 69,449,687	$ 72,181,527	$ 46,209,491	$ 45,872,467	$ 39,811,665	$ 1,008,372,209
GAS IN MCF							
Volume	15,366,561,840	537,602,876	496,692,165	374,440,453	422,912,834	408,854,742	17,607,064,910
Market Value	$ 9,528,844,906	$1,441,371,994	$1,344,175,671	$ 782,954,115	$ 695,041,094	$ 716,459,283	$14,508,847,063
Royalties	$ 1,187,206,447	$ 181,441,663	$ 167,397,414	$ 97,696,290	$ 85,839,782	$ 88,855,918	$ 1,808,437,514
COAL IN TONS							
Volume	41,296,382	4,647,719	7,721,749	4,253,749	3,261,040	3,372,358	64,552,997
Market Value	$ 472,992,519	$ 85,533,487	$ 162,555,721	$ 101,069,049	$ 83,322,695	$ 85,091,413	$ 990,564,884
Royalties	$ 22,761,192	$ 11,127,684	$ 23,177,307	$ 13,475,148	$ 10,595,326	$ 10,999,760	$ 92,136,417
OTHER PRODUCTS							
Market Value	$ 4,143,611,734	$ 210,691,470	$ 192,686,624	$ 136,243,028	$ 170,638,756	$ 240,206,551	$ 5,094,078,163
Royalties	$ 167,819,554	$ 10,916,707	$ 10,274,597	$ 7,633,223	$ 8,392,685	$ 9,115,771	$ 214,152,537
TOTAL ROYALTIES							
ALL MINERALS	$ 2,112,634,565	$ 272,935,741	$ 273,030,845	$ 165,014,152	$ 150,700,260	$ 148,783,114	$ 3,123,098,677

	1920-83	1984	1985	1986	1987	1988	1920-88
NORTH CAROLINA							
OTHER PRODUCTS							
Market Value	$ 315,696	$ 0	$ 0	$ 0	$ 0	$ 0	315,696
Royalties	$ 19,154	$ 0	$ 0	$ 0	$ 0	$ 0	19,154
TOTAL ROYALTIES							
ALL MINERALS	$ 19,154	$ 0	$ 0	$ 0	$ 0	$ 0	19,154

Table 19.--Summary of volume, market value, and royalties by State and commodity from Federal onshore mineral leases, 1920-88 (cont.)

	1920-83	1984	1985	1986	1987	1988	1920-88
NORTH DAKOTA							
OIL IN BARRELS							
Volume	106,169,392	13,439,445	13,545,556	11,413,393	9,872,501	8,291,959	162,732,246
Market Value	$ 2,018,389,909	$ 388,422,762	$ 343,193,855	$ 165,379,797	$ 161,967,416	$ 124,380,261	$ 3,201,734,000
Royalties	$ 243,376,642	$ 47,734,009	$ 40,104,665	$ 19,566,235	$ 18,646,892	$ 14,394,980	$ 383,823,423
GAS IN MCF							
Volume	71,959,723	15,393,613	14,199,639	16,846,282	13,407,249	13,285,646	145,092,152
Market Value	$ 95,226,143	$ 39,245,983	$ 41,416,489	$ 41,115,430	$ 21,009,836	$ 21,351,877	$ 259,365,758
Royalties	$ 11,586,182	$ 4,953,350	$ 4,618,092	$ 4,692,644	$ 2,399,204	$ 2,641,470	$ 30,890,942
COAL IN TONS							
Volume	35,812,088	1,882,878	8,373,290	4,876,793	5,326,944	5,171,486	61,443,479
Market Value	$ 93,253,851	$ 28,713,890	$ 85,401,113	$ 55,315,790	$ 47,033,210	$ 42,476,935	$ 352,194,789
Royalties	$ 6,541,328	$ 1,894,923	$ 7,211,535	$ 6,843,255	$ 4,721,574	$ 4,905,510	$ 32,118,075
OTHER PRODUCTS							
Market Value	$ 40,655,467	$ 11,075,341	$ 10,653,270	$ 5,008,842	$ 6,202,058	$ 5,335,249	$ 78,930,227
Royalties	$ 1,760,187	$ 1,370,404	$ 1,325,880	$ 561,197	$ 773,828	$ 516,844	$ 6,308,340
TOTAL ROYALTIES							
ALL MINERALS	$ 263,264,339	$ 55,952,686	$ 53,260,172	$ 31,663,331	$ 26,541,448	$ 22,458,804	$ 453,140,780

	1920-83	1984	1985	1986	1987	1988	1920-88
OHIO							
OIL IN BARRELS							
Volume	806,627	2,377	6,297	10,721	9,918	20,680	856,620
Market Value	$ 2,561,710	$ 65,837	$ 161,611	$ 235,334	$ 169,618	$ 325,706	$ 3,519,816
Royalties	$ 388,272	$ 8,229	$ 19,146	$ 25,739	$ 21,202	$ 40,788	$ 503,376
GAS IN MCF							
Volume	4,734,549	462,692	203,270	200,943	76,476	1,279,791	6,957,721
Market Value	$ 1,627,826	$ 121,268	$ 86,772	$ 67,385	$ 152,953	$ 1,577,520	$ 3,633,724
Royalties	$ 183,409	$ 14,316	$ 10,130	$ 7,055	$ 19,119	$ 197,190	$ 431,219
COAL IN TONS							
Volume	489,461	0	0	0	0	0	489,461
Market Value	$ 2,066,465	$ 0	$ 0	$ 0	$ 0	$ 0	$ 2,066,465
Royalties	$ 89,459	$ 0	$ 0	$ 0	$ 0	$ 0	$ 89,459
TOTAL ROYALTIES							
ALL MINERALS	$ 661,140	$ 22,545	$ 29,276	$ 32,794	$ 40,321	$ 237,978	$ 1,024,054

Table 19.--Summary of volume, market value, and royalties by State and commodity from Federal onshore mineral leases, 1920-88 (cont.)

	1920-83	1984	1985	1986	1987	1988	1920-88
OKLAHOMA							
OIL IN BARRELS							
Volume	16,010,588	277,626	315,895	217,869	214,437	237,789	17,274,204
Market Value $	77,094,790 $	7,603,810 $	8,424,705 $	3,611,615 $	3,708,114 $	3,770,221 $	104,213,264
Royalties $	9,039,409 $	892,079 $	1,048,228 $	428,522 $	463,781 $	471,278 $	12,343,297
GAS IN MCF							
Volume	295,407,993	14,578,945	19,618,008	17,085,700	16,301,800	17,623,853	380,616,305
Market Value $	244,462,188 $	43,152,009 $	51,309,783 $	32,150,645 $	23,764,593 $	25,323,059 $	420,162,277
Royalties $	30,142,030 $	5,394,012 $	6,308,460 $	3,469,579 $	2,952,811 $	3,156,281 $	51,423,173
COAL IN TONS							
Volume	9,117,050	25,112	44,209	31,644	0	80,783	9,298,798
Market Value $	141,012,046 $	897,256 $	1,007,511 $	904,136 $	0 $	2,959,144 $	146,780,093
Royalties $	6,143,839 $	112,157 $	107,545 $	20,583 $	0 $	69,285 $	6,453,409
OTHER PRODUCTS							
Market Value $	34,389,583 $	1,355,699 $	774,575 $	407,114 $	199,210 $	525,310 $	37,651,491
Royalties $	496,426 $	60,867 $	52,904 $	30,475 $	26,769 $	39,433 $	706,874
TOTAL ROYALTIES							
ALL MINERALS $	45,821,704 $	6,459,115 $	7,517,137 $	3,949,159 $	3,443,361 $	3,736,277 $	70,926,753

	1920-83	1984	1985	1986	1987	1988	1920-88
OREGON							
COAL IN TONS							
Volume	20,603	0	0	0	0	0	20,603
Market Value $	374,084 $	0 $	0 $	0 $	0 $	0 $	374,084
Royalties $	24,147 $	0 $	0 $	0 $	0 $	0 $	24,147
OTHER PRODUCTS							
Market Value $	40 $	0 $	0 $	0 $	0 $	0 $	40
Royalties $	5 $	0 $	0 $	0 $	0 $	0 $	5
TOTAL ROYALTIES							
ALL MINERALS $	24,152 $	0 $	0 $	0 $	0 $	0 $	24,152

Table 19.--Summary of volume, market value, and royalties by State and commodity from Federal onshore mineral leases, 1920-88 (cont.)

	1920-83	1984	1985	1986	1987	1988	1920-88
PENNSYLVANIA							
OIL IN BARRELS							
Volume	989	0	0	0	2,876	4,654	8,519
Market Value $	4,041 $	0 $	0 $	0 $	52,310 $	67,536 $	123,887
Royalties $	491 $	0 $	0 $	0 $	6,539 $	8,375 $	15,405
GAS IN MCF							
Volume	2,794,991	0	0	0	9,260	73,898	2,878,149
Market Value $	952,753 $	0 $	0 $	0 $	7,686 $	39,905 $	1,000,344
Royalties $	95,385 $	0 $	0 $	0 $	961 $	4,988 $	101,334
TOTAL ROYALTIES							
ALL MINERALS $	95,876 $	0 $	0 $	0 $	7,500 $	13,363 $	116,739

	1920-83	1984	1985	1986	1987	1988	1920-88
SOUTH CAROLINA							
OTHER PRODUCTS							
Market Value $	118,542 $	0 $	0 $	0 $	0 $	0 $	118,542
Royalties $	5,927 $	0 $	0 $	0 $	0 $	0 $	5,927
TOTAL ROYALTIES							
ALL MINERALS $	5,927 $	0 $	0 $	0 $	0 $	0 $	5,927

	1920-83	1984	1985	1986	1987	1988	1920-88
SOUTH DAKOTA							
OIL IN BARRELS							
Volume	1,811,543	350,548	517,580	553,152	509,500	422,565	4,164,888
Market Value $	37,854,119 $	9,794,808 $	13,125,718 $	7,970,367 $	8,253,114 $	6,262,965 $	83,261,091
Royalties $	4,731,814 $	1,224,334 $	1,537,620 $	887,255 $	1,031,639 $	772,725 $	10,185,387
GAS IN MCF							
Volume	1,203,931	177,367	668,536	357,750	366,255	279,611	3,053,450
Market Value $	3,167,252 $	579,999 $	2,508,934 $	511,120 $	455,215 $	421,667 $	7,644,187
Royalties $	365,904 $	72,499 $	221,214 $	57,179 $	53,361 $	51,305 $	821,462
COAL IN TONS							
Volume	41,435	0	0	0	0	0	41,435
Market Value $	69,381 $	0 $	0 $	0 $	0 $	0 $	69,381
Royalties $	7,119 $	0 $	0 $	0 $	0 $	0 $	7,119
OTHER PRODUCTS							
Market Value $	20,561 $	0 $	13,171 $	21,820 $	0 $	37,387 $	92,939
Royalties $	2,571 $	0 $	1,647 $	2,727 $	0 $	4,673 $	11,618
TOTAL ROYALTIES							
ALL MINERALS $	5,107,408 $	1,296,833 $	1,760,481 $	947,161 $	1,085,000 $	828,703 $	11,025,586

Table 19.--Summary of volume, market value, and royalties by State and commodity from Federal onshore mineral leases, 1920-88 (cont.)

	1920-83	1984	1985	1986	1987	1988	1920-88
TENNESSEE							
OTHER PRODUCTS							
Market Value	$ 81,340	$ 0	$ 0	$ 0	$ 0	$ 0	81,340
Royalties	$ 4,452	$ 0	$ 0	$ 0	$ 0	$ 0	4,452
TOTAL ROYALTIES							
ALL MINERALS	$ 4,452	$ 0	$ 0	$ 0	$ 0	$ 0	4,452

	1920-83	1984	1985	1986	1987	1988	1920-88
TEXAS							
OIL IN BARRELS							
Volume	7,113,073	170,528	327,658	336,261	378,686	283,096	8,609,302
Market Value	$ 39,770,907	$ 4,840,793	$ 8,412,278	$ 5,353,592	$ 7,642,595	$ 4,470,570	$ 70,490,735
Royalties	$ 5,146,718	$ 627,111	$ 1,160,764	$ 741,734	$ 803,488	$ 571,495	$ 9,051,310
GAS IN MCF							
Volume	77,122,431	1,417,654	3,184,307	2,937,725	3,970,109	1,722,372	90,354,598
Market Value	$ 30,407,195	$ 5,597,976	$ 9,153,154	$ 5,032,775	$ 6,346,829	$ 2,829,021	$ 59,366,950
Royalties	$ 2,918,272	$ 699,747	$ 917,626	$ 602,246	$ 785,083	$ 346,882	$ 6,269,856
OTHER PRODUCTS							
Market Value	$ 10,072,246	$ 210,154	$ 432,584	$ 496,002	$ 72,762	$ 105,935	$ 11,389,683
Royalties	$ 560,785	$ 26,481	$ 49,033	$ 70,953	$ 8,215	$ 13,655	$ 729,122
TOTAL ROYALTIES							
ALL MINERALS	$ 8,625,775	$ 1,353,339	$ 2,127,423	$ 1,414,933	$ 1,596,786	$ 932,032	$ 16,050,288

	1920-83	1984	1985	1986	1987	1988	1920-88
UTAH							
OIL IN BARRELS							
Volume	220,247,236	7,060,663	6,973,348	6,512,093	6,516,132	5,869,096	253,178,568
Market Value	$ 1,232,315,155	$ 181,605,459	$ 163,415,228	$ 86,278,807	$ 105,001,154	$ 79,881,759	$ 1,848,497,562
Royalties	$ 154,129,837	$ 22,810,553	$ 20,409,152	$ 10,767,847	$ 13,013,191	$ 9,898,161	$ 231,028,741
GAS IN MCF							
Volume	690,565,749	41,273,136	34,859,573	32,554,777	28,449,356	28,646,059	856,348,650
Market Value	$ 375,208,923	$ 137,945,478	$ 105,988,954	$ 77,507,744	$ 51,518,668	$ 44,588,839	$ 792,758,606
Royalties	$ 46,482,429	$ 17,329,898	$ 12,464,130	$ 9,983,151	$ 6,362,239	$ 5,647,502	$ 98,269,349
COAL IN TONS							
Volume	161,181,147	8,326,593	11,185,062	10,631,069	13,707,055	14,294,720	219,325,646
Market Value	$ 1,835,304,905	$ 204,084,794	$ 287,549,077	$ 302,463,575	$ 379,960,984	$ 395,922,539	$ 3,405,285,874
Royalties	$ 40,888,851	$ 7,588,067	$ 15,265,329	$ 16,321,635	$ 22,262,416	$ 16,628,521	$ 118,954,819
OTHER PRODUCTS							
Market Value	$ 92,556,968	$ 21,126,798	$ 12,062,855	$ 10,821,749	$ 9,555,372	$ 22,331,466	$ 168,455,208
Royalties	$ 4,398,334	$ 2,522,023	$ 1,365,958	$ 1,045,847	$ 944,250	$ 2,310,862	$ 12,587,274
TOTAL ROYALTIES							
ALL MINERALS	$ 245,899,451	$ 50,250,541	$ 49,504,569	$ 38,118,480	$ 42,582,096	$ 34,485,046	$ 460,840,183

Table 19.--Summary of volume, market value, and royalties by State and commodity from Federal onshore mineral leases, 1920-88 (cont.)

	1920-83	1984	1985	1986	1987	1988	1920-88
VIRGINIA							
COAL IN TONS							
Volume	798	33,786	14,112	0	0	0	48,696
Market Value $	4,589 $	1,248,476 $	491,891 $	0 $	0 $	0 $	1,744,956
Royalties $	119 $	99,525 $	39,278 $	(23,089)$	0 $	0 $	115,833
OTHER PRODUCTS							
Market Value $	7,630,804 $	0 $	54,592 $	0 $	346,134 $	213,230 $	8,244,760
Royalties $	257,365 $	0 $	1,458 $	0 $	12,743 $	10,662 $	282,228
TOTAL ROYALTIES							
ALL MINERALS $	257,484 $	99,525 $	40,736 $	(23,089)$	12,743 $	10,662 $	398,061

	1920-83	1984	1985	1986	1987	1988	1920-88
WASHINGTON							
COAL IN TONS							
Volume	2,062,551	836,481	300,850	558,856	528,025	507,916	4,794,679
Market Value $	12,220,153 $	17,204,346 $	6,007,974 $	14,340,245 $	14,853,343 $	13,134,627 $	77,760,688
Royalties $	359,419 $	167,295 $	64,405 $	111,771 $	105,605 $	111,788 $	920,283
TOTAL ROYALTIES							
ALL MINERALS $	359,419 $	167,295 $	64,405 $	111,771 $	105,605 $	111,788 $	920,283

	1920-83	1984	1985	1986	1987	1988	1920-88
WEST VIRGINIA							
GAS IN MCF							
Volume	35,590,284	0	796,030	1,349,894	2,114,347	1,984,178	41,834,733
Market Value $	12,900,901 $	0 $	1,884,550 $	2,555,946 $	2,755,023 $	2,550,636 $	22,647,056
Royalties $	1,995,740 $	0 $	119,205 $	137,271 $	341,749 $	317,435 $	2,911,400
TOTAL ROYALTIES							
ALL MINERALS $	1,995,740 $	0 $	119,205 $	137,271 $	341,749 $	317,435 $	2,911,400

Table 19.--Summary of volume, market value, and royalties by State and commodity from Federal onshore mineral leases, 1920-88 (cont.)

	1920-83	1984	1985	1986	1987	1988	1920-88
WYOMING							
OIL IN BARRELS							
Volume	2,921,012,808	70,813,337	80,779,449	75,310,537	71,326,893	66,120,236	3,285,363,260
Market Value	$16,788,062,228	$1,945,150,336	$1,953,139,676	$1,069,870,090	$1,162,680,852	$ 909,032,299	$23,827,935,481
Royalties	$ 2,118,281,225	$ 244,129,907	$ 231,917,178	$ 124,021,213	$ 136,076,684	$ 108,357,983	$ 2,962,784,190
GAS IN MCF							
Volume	5,029,835,504	312,088,639	257,094,699	235,887,124	267,618,588	312,672,292	6,415,196,846
Market Value	$ 3,577,238,213	$ 900,433,243	$ 779,883,799	$ 550,364,657	$ 476,533,041	$ 447,073,013	$ 6,731,525,966
Royalties	$ 435,818,679	$ 120,544,028	$ 95,900,785	$ 71,874,321	$ 59,067,090	$ 56,927,484	$ 840,132,387
COAL IN TONS							
Volume	434,645,200	69,610,380	100,621,788	111,407,678	120,404,308	145,925,209	982,614,563
Market Value	$ 3,629,955,023	$ 509,436,577	$1,243,721,251	$1,505,693,411	$1,638,362,980	$1,403,440,463	$ 9,930,609,705
Royalties	$ 106,504,156	$ 23,449,891	$ 27,705,941	$ 28,486,778	$ 60,894,526	$ 91,858,561	$ 338,899,853
OTHER PRODUCTS							
Market Value	$ 2,078,392,848	$ 191,331,536	$ 212,532,821	$ 210,588,289	$ 143,112,419	$ 206,213,443	$ 3,042,171,356
Royalties	$ 99,896,413	$ 13,018,753	$ 16,018,171	$ 13,029,094	$ 8,781,833	$ 12,098,334	$ 162,842,598
TOTAL ROYALTIES							
ALL MINERALS	$ 2,760,500,473	$ 401,142,679	$ 371,542,075	$ 237,411,406	$ 264,820,133	$ 269,242,362	$ 4,304,659,028

	1920-83	1984	1985	1986	1987	1988	1920-88
ONSHORE FEDERAL TOTALS							
OIL IN BARRELS							
Volume	6,847,517,737	152,339,422	169,968,698	157,297,487	149,977,454	138,989,604	7,616,090,402
Market Value	$37,424,782,093	$4,086,190,765	$4,117,255,913	$2,227,484,741	$2,389,418,077	$1,887,117,906	$52,132,249,495
Royalties	$ 4,742,804,365	$ 519,046,615	$ 492,367,908	$ 268,689,563	$ 289,069,747	$ 230,896,902	$ 6,542,875,100
GAS IN MCF							
Volume	27,789,365,328	1,112,769,625	992,989,861	821,841,109	887,679,926	901,859,470	32,506,505,319
Market Value	$16,101,589,895	$2,907,402,136	$2,661,567,110	$1,764,993,100	$1,475,653,725	$1,445,305,049	$26,356,511,015
Royalties	$ 2,016,294,018	$ 371,155,164	$ 328,657,320	$ 224,601,025	$ 183,941,568	$ 182,044,265	$ 3,306,693,360
COAL IN TONS							
Volume	953,661,617	115,817,738	159,227,236	165,738,139	171,162,306	199,209,780	1,765,816,816
Market Value	$ 8,946,616,781	$1,404,670,760	$2,330,911,821	$2,485,867,868	$2,669,680,063	$2,429,997,791	$20,267,745,084
Royalties	$ 284,872,143	$ 69,359,702	$ 103,473,037	$ 108,420,624	$ 152,470,369	$ 172,795,745	$ 891,391,620
OTHER PRODUCTS							
Market Value	$10,802,037,940	$ 847,824,435	$ 938,429,282	$ 844,786,663	$ 840,880,757	$1,087,472,411	$15,361,431,488
Royalties	$ 492,803,089	$ 57,133,851	$ 68,455,626	$ 62,759,211	$ 56,929,325	$ 63,798,020	$ 801,879,122
TOTAL ROYALTIES							
ALL MINERALS	$ 7,536,773,615	$1,016,695,332	$ 992,953,891	$ 664,470,423	$ 682,411,009	$ 649,534,932	$11,542,839,202

Table 20.--1988 volume, market value, and royalties by commodity and State from Federal onshore mineral leases

	Production Volume	Market Value	Royalties Received
BENTONITE			
Wyoming	109,855	$ 120,840	$ 15,105
CARBON DIOXIDE			
Colorado	182,148,179	$ 114,424,008	$ 9,284,392
New Mexico	10,196,708	5,656,705	706,531
Subtotal	192,344,887	$ 120,080,713	$ 9,990,923
COAL			
Colorado	8,992,859	$ 183,596,741	$ 12,146,642
Kentucky	238,423	6,023,729	484,153
Montana	20,626,026	297,352,200	35,591,525
New Mexico	3,372,358	85,091,413	10,999,760
North Dakota	5,171,486	42,476,935	4,905,510
Oklahoma	80,783	2,959,144	69,285
Utah	14,294,720	395,922,539	16,628,521
Washington	507,916	13,134,627	111,788
Wyoming	145,925,209	1,403,440,463	91,858,561
Subtotal	199,209,780	$2,429,997,791	$172,795,745
COPPER			
Missouri	68,976	$ 33,623,820	$ 1,423,313
FLUORSPAR			
Illinois	809	$ 134,745	$ 6,064
GARNET SANDS			
Idaho	2,228	$ 2,228	$ 156

Table 20.--1988 volume, market value, and royalties by commodity and State from Federal onshore mineral leases (cont.)

	Production Volume	Market Value	Royalties Received
GAS			
Alabama	124,892	$ 197,627	$ 24,737
Alaska	28,776,378	35,970,473	4,496,309
Arkansas	7,165,772	14,268,539	1,865,054
California	4,174,018	7,556,939	1,656,985
Colorado	38,942,606	63,152,510	7,827,994
Kansas	10,958,785	15,313,237	1,910,998
Kentucky	239,215	679,766	84,971
Louisiana	12,651,360	20,234,725	2,814,206
Maryland	6,391	4,026	503
Michigan	3,009,380	7,266,218	918,799
Mississippi	997,437	1,963,853	243,580
Montana	8,390,794	16,482,316	2,053,674
New Mexico	408,854,742	716,459,283	88,855,918
North Dakota	13,285,646	21,351,877	2,641,470
Ohio	1,279,791	1,577,520	197,190
Oklahoma	17,623,853	25,323,059	3,156,281
Pennsylvania	73,898	39,905	4,988
South Dakota	279,611	421,667	51,305
Texas	1,722,372	2,829,021	346,882
Utah	28,646,059	44,588,839	5,647,502
West Virginia	1,984,178	2,550,636	317,435
Wyoming	312,672,292	447,073,013	56,927,484
Subtotal	901,859,470	$1,445,305,049	$182,044,265
GAS LOST			
California	517,060	$ 1,845,904	$ 230,738
Colorado	5,507	13,272	1,659
New Mexico	128,562	382,411	45,850
Wyoming	486	1,522	190
Subtotal	651,615	$ 2,243,109	$ 278,437

Table 20.--1988 volume, market value, and royalties by commodity and State from Federal onshore mineral leases (cont.)

	Production Volume	Market Value	Royalties Received
GAS PLANT PRODUCTS			
Alabama	2,526	$ 699	$ 279
Alaska	1,496,104	460,133	57,234
California	13,532,780	4,710,099	319,235
Colorado	4,396,813	875,632	60,200
Kansas	906,481	269,096	32,078
Louisiana	10,859,542	3,191,890	390,145
Michigan	1,357,613	260,012	28,928
Montana	3,929,776	1,081,662	92,782
New Mexico	294,084,443	63,281,802	4,907,356
North Dakota	19,528,270	4,863,133	482,798
Oklahoma	2,742,753	525,310	39,433
South Dakota	143,795	37,387	4,673
Texas	584,983	105,935	13,655
Utah	42,543,055	16,951,629	1,949,665
Wyoming	167,734,568	43,391,723	4,173,139
Subtotal	563,843,502	$ 140,006,142	$ 12,551,600
GEOTHERMAL			
California	10,584,073	$ 89,917,898	$ 11,239,445
Nevada	879,256	7,476,949	748,256
Utah	322,944	2,741,604	277,654
Subtotal	11,786,273	$ 100,136,451	$ 12,265,355
GILSONITE			
Utah	314	$ 46,306	$ 5,788
HOT WATER			
California	1,153,539	$ 9,378,270	$ 937,827
Nevada	74,953	607,869	42,861
Subtotal	1,228,492	$ 9,986,139	$ 980,688
IRON ORE			
Minnesota	12,657	$ 354,396	$ 11,579
LANGBEINITE			
New Mexico	649,360	$ 41,680,904	$ 833,618
LEAD			
Illinois	3	$ 115	$ 6
Missouri	298,402	148,595,204	4,355,661
Subtotal	298,405	$ 148,595,319	$ 4,355,667

Table 20.--1988 volume, market value, and royalties by commodity and State from Federal onshore mineral leases (cont.)

	Production Volume	Market Value	Royalties Received
LEONARDITE			
North Dakota	29	$ 200	$ 25
LIMESTONE			
Virginia	43,680	$ 213,230	$ 10,662
MAGNESIUM			
Utah	117,191	$ 1,012,976	$ 30,389
OIL			
Alabama	31,535	$ 484,215	$ 106,374
Alaska	739,102	10,972,761	1,359,683
Arkansas	985	14,690	1,836
California	18,712,811	194,252,318	23,950,409
Colorado	7,919,326	118,782,823	17,397,637
Florida	41,466	652,781	81,597
Illinois	14,539	218,517	27,315
Kansas	334,921	5,139,298	675,791
Kentucky	5,721	86,173	12,693
Louisiana	1,051,275	16,531,624	1,847,756
Michigan	99,248	1,500,129	192,311
Mississippi	586,271	8,787,621	1,089,164
Montana	3,839,065	53,578,775	6,092,168
Nebraska	102,534	1,558,588	195,469
Nevada	3,167,416	28,308,323	3,539,249
New Mexico	21,093,314	318,057,953	39,811,665
North Dakota	8,291,959	124,380,261	14,394,980
Ohio	20,680	325,706	40,788
Oklahoma	237,789	3,770,221	471,278
Pennsylvania	4,654	67,536	8,375
South Dakota	422,565	6,262,965	772,725
Texas	283,096	4,470,570	571,495
Utah	5,869,096	79,881,759	9,898,161
Wyoming	66,120,236	909,032,299	108,357,983
Subtotal	138,989,604	$1,887,117,906	$230,896,902
OIL LOST			
California	398	$ 4,657	$ 450
North Dakota	36	547	68
Subtotal	434	$ 5,204	$ 518

Table 20.--1988 volume, market value, and royalties by commodity and State from Federal onshore mineral leases (cont.)

	Production Volume	Market Value	Royalties Received
PHOSPHATE			
Idaho	5,275,738	$ 45,512,872	$ 3,144,231
Montana	67,901	1,054,960	52,748
Wyoming	78,937	553,347	27,114
Subtotal	5,422,576	$ 47,121,179	$ 3,224,093
POTASH			
California	81,671	$ 7,713,100	$ 385,655
New Mexico	1,643,345	128,360,049	2,567,207
Utah	17,168	1,526,325	45,790
Subtotal	1,742,184	$ 137,599,474	$ 2,998,652
PURGE LIQUOR			
Wyoming	17,506	$ 794,076	$ 39,701
QUARTZ CRYSTALS			
Arkansas	60,868	$ 218,306	$ 11,036
Georgia	39	136	7
Subtotal	60,907	$ 218,442	$ 11,043
SAND AND GRAVEL			
Nevada	3,326,183	$ 7,051,509	$ 394,884
SODIUM			
California	917,829	$ 104,527,882	$ 5,360,684
New Mexico	496,516	406,014	20,229
Utah	30,943	52,626	1,576
Wyoming	2,430,137	161,985,514	8,052,165
Subtotal	3,875,425	$ 266,972,036	$ 13,434,654
SULFUR			
Montana	919	$ 26,818	$ 2,011
New Mexico	6,557	438,667	34,980
North Dakota	9,010	471,368	33,953
Wyoming	(21,863)	(633,579)	(209,081)
Subtotal	(5,377)	$ 303,274	$ (138,137)
ZINC			
Illinois	4	$ 1,454	$ 65
Missouri	61,405	29,168,245	1,073,178
Subtotal	61,409	$ 29,169,699	$ 1,073,243
TOTAL		$6,849,893,157	$649,534,932

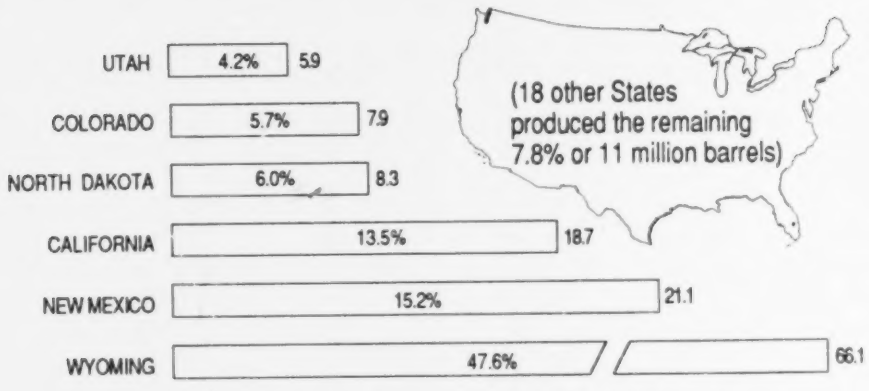


Figure 15. — 1988 oil production by State, in millions of barrels, from Federal onshore mineral leases

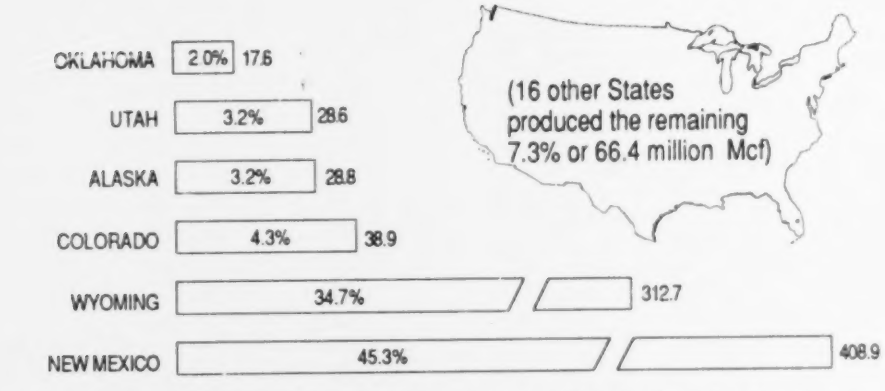


Figure 16. — 1988 gas production by State, in millions of Mcf, from Federal onshore mineral leases

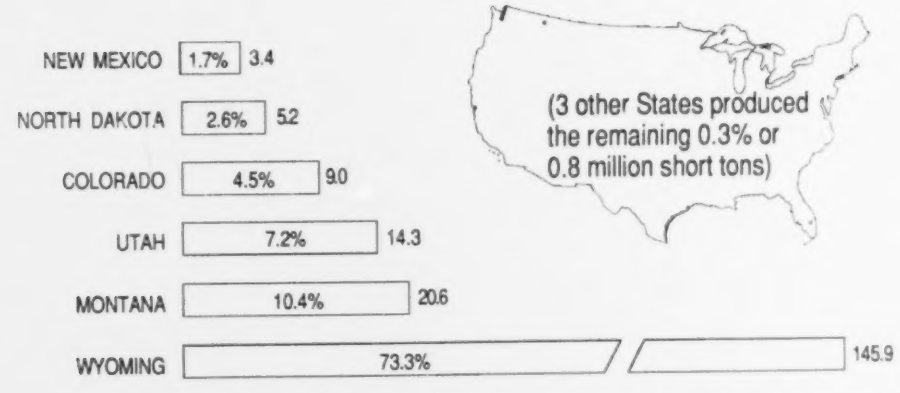


Figure 17. — 1988 coal production by State, in millions of short tons, from Federal onshore mineral leases

Table 21.--Summary of minimum royalties by State from Federal onshore mineral leases, 1985-88

	1985	1986	1987	1988	1985-88
Alabama	$ 15,042	$ 16,042	$ 16,360	$ 16,041	$ 64,485
Alaska	1,683	1,047	1,947	295	4,972
Arizona	1,443	640	---	---	2,083
Arkansas	41,639	36,958	31,160	37,827	147,584
California	5,505	40,757	27,068	26,392	99,722
Colorado	395,922	2,033,335	1,661,646	510,195	4,601,098
Florida	65	65	3,601	160	3,891
Georgia	---	---	---	1,090	1,090
Idaho	34,923	17,656	24,563	70,493	147,635
Illinois	549	1,098	549	1,164	3,360
Kansas	(17,838)	24,035	4,071	16,890	27,158
Kentucky	1,171	8,760	6,211	7,661	23,803
Louisiana	2,131	921	2,498	34,885	40,435
Maryland	4,114	3,387	1,413	3,659	12,573
Michigan	2,932	2,152	2,192	(3,776)	3,500
Minnesota	1	---	170,310	48,660	218,971
Mississippi	5,802	8,124	9,107	2,261	25,294
Missouri	5,864	7,483	6,891	5,707	25,945
Montana	143,482	200,816	413,085	177,646	935,029
Nebraska	220	1,680	6,356	702	8,958
Nevada	1,440	2,876	2,521	2,394	9,231
New Mexico	411,220	512,496	2,497,894	689,765	4,111,375
North Carolina	---	---	---	474	474
North Dakota	53,751	23,663	21,092	46,391	144,897
Ohio	133	164	324	141	762
Oklahoma	19,432	23,015	16,665	19,637	78,749
Pennsylvania	3,445	1,684	1,691	(768)	6,052
South Dakota	4,945	15,566	12,615	15,063	48,189
Texas	11,281	10,328	5,505	4,863	31,977
Utah	231,569	177,324	237,610	277,518	924,021
Virginia	2,168	2,168	2,168	2,168	8,672
Washington	---	---	---	4,840	4,840
West Virginia	43,168	46,030	40,418	40,793	170,409
Wyoming	354,186	4,701,078	9,149,789	9,218,165	23,423,218
TOTAL	$1,782,388	$7,921,348	$14,377,320	$11,279,396	$35,360,452

Table 22.--Summary of rents by State from Federal onshore mineral leases, 1985-88

	1985	1986	1987	1988	1985-88
Alabama	$ 326,529	$ 145,248	$ 153,280	$ 157,611	$ 782,668
Alaska	5,969,216	4,295,518	2,759,043	2,234,251	15,258,028
Arizona	1,791,405	1,222,881	961,550	823,574	4,799,410
Arkansas	1,108,615	548,218	401,638	685,003	2,743,474
California	2,997,766	1,810,995	1,601,256	1,696,112	8,106,129
Colorado	9,633,633	8,005,907	7,458,601	7,471,013	32,569,154
Florida	554,437	375,523	326,886	311,274	1,568,120
Georgia	99,591	559	36	36	100,222
Idaho	3,558,084	1,628,226	826,500	629,181	6,641,991
Illinois	4,873	3,968	3,134	1,315	13,290
Indiana	401	445	415	415	1,676
Iowa	---	1,440	180	---	1,620
Kansas	80,133	41,154	96,116	37,609	255,012
Kentucky	54,764	48,391	37,523	29,366	170,044
Louisiana	266,625	238,159	169,248	144,390	818,422
Maryland	2,613	5,623	3,406	(758)	10,884
Michigan	300,085	428,784	460,452	397,514	1,586,835
Minnesota	8,116	30,913	20,975	7,586	67,590
Mississippi	733,632	651,992	578,660	568,985	2,533,269
Missouri	24,581	9,324	6,153	4,416	44,474
Montana	11,850,125	7,977,652	5,605,711	5,022,967	30,456,455
Nebraska	204,749	129,710	86,091	60,193	480,743
Nevada	12,615,186	7,164,123	5,194,461	8,040,706	33,014,476
New Mexico	11,442,158	7,293,927	6,529,547	6,539,113	31,804,745
New York	11,981	9,236	8,489	11,022	40,728
North Carolina	57,228	40,719	3,350	1,387	102,684
North Dakota	835,847	479,541	656,173	614,944	2,586,505
Ohio	27,819	38,765	16,670	13,209	96,463
Oklahoma	508,230	463,503	421,289	418,987	1,812,009
Oregon	4,400,269	1,967,978	1,222,232	1,025,777	8,616,256
Pennsylvania	2,093	3,005	8,633	(3,479)	10,252
South Carolina	1,118	1,528	6,582	4,237	13,465
South Dakota	948,123	744,865	733,654	689,311	3,115,953
Tennesse	16,952	13,374	10,442	9,701	50,469
Texas	280,715	279,668	212,494	181,886	954,763
Utah	13,735,114	8,282,556	7,342,707	7,066,064	36,426,441
Virginia	478,873	319,024	287,466	147,277	1,232,640
Washington	1,312,929	840,291	733,107	730,338	3,616,665
West Virginia	260,516	382,409	270,171	335,525	1,248,621
Wisconsin	16,214	60,195	72,967	110,574	259,950
Wyoming	19,287,942	17,468,016	16,162,103	18,592,213	71,510,274
TOTAL	$105,809,280	$73,453,353	$61,449,391	$64,810,845	$305,522,869

Table 23.--1988 bonuses paid by State and commodity on sales of Federal onshore mineral leases

	No. of Leases	Acres Leased	Bonuses Paid
ALABAMA			
Oil & Gas	1	40	$ 2,440
ARKANSAS			
Oil & Gas	81	111,006	549,843
CALIFORNIA			
Geothermal	12	22,918	2,944,117
Oil & Gas	11	1,102	111,933
COLORADO			
Oil & Gas	159	114,697	1,512,372
KANSAS			
Oil & Gas	13	1,757	3,722,530
LOUISIANA			
Oil & Gas	4	849	115,650
MISSISSIPPI			
Oil & Gas	2	221	25,586
MONTANA			
Oil & Gas	129	76,911	336,874
NEBRASKA			
Oil & Gas	1	40	800
NEVADA			
Geothermal	24	50,855	469,317
Oil & Gas	159	277,992	2,513,489
NEW MEXICO			
Oil & Gas	318	165,648	10,298,729
NORTH DAKOTA			
Oil & Gas	22	4,173	79,509
OKLAHOMA			
Oil & Gas	35	3,059	981,216
SOUTH DAKOTA			
Oil & Gas	15	11,820	77,849
TEXAS			
Oil & Gas	7	2,495	214,095
UTAH			
Geothermal	1	918	3,462
Oil & Gas	153	184,934	3,617,536
WYOMING			
Bentonite	1	400	6,200
Oil & Gas	1,354	956,279	27,048,287
Sodium	1	317	100,277
TOTAL	2,503	1,988,431	$54,732,111

NOTE: Fiscal year data from Public Land Statistics, 1988, Bureau of Land Management.

Table 24.--Summary of bonuses paid on sales of Federal onshore mineral leases, 1954-88

	OIL & GAS		OTHER MINERALS		TOTALS	
	Acres Leased	Bonuses Paid	Acres Leased	Bonuses Paid	Acres Leased	Bonuses Paid
1954	7,726	$ 255,912	4,362	$ 59,260	12,088	$ 315,172
1955	16,145	833,305	3,319	414,804	19,464	1,248,109
1956	21,497	1,241,479	7,608	170,293	29,105	1,411,772
1957	182,233	1,197,405	14,663	297,265	196,896	1,494,670
1958	10,564	274,432	28,968	1,927,505	39,532	2,201,937
1959	32,283	882,831	20,474	305,847	52,757	1,188,678
1960	21,947	668,865	11,748	111,291	33,695	780,156
1961	27,466	12,395,374	25,863	1,030,725	53,329	13,426,099
1962	32,711	7,059,451	41,507	223,379	74,218	7,282,830
1963	53,124	2,089,236	54,244	475,288	107,368	2,564,524
1964	20,335	649,918	32,290	1,112,824	52,625	1,762,742
1965	46,572	1,805,432	30,009	1,072,714	76,581	2,878,146
1966	35,453	572,837	48,979	1,071,869	84,432	1,644,706
1967	61,665	764,296	47,606	936,656	109,271	1,700,952
1968	71,505	972,523	95,303	3,102,240	166,808	4,074,763
1969	36,969	754,543	---	---	36,969	754,543
1970	38,724	478,890	18,493	370,395	57,217	849,285
1971	52,102	1,163,136	28,706	7,627,114	80,808	8,790,250
1972	88,326	1,117,543	---	---	88,326	1,117,543
1973	89,315	2,203,370	133	33,635	89,448	2,237,005
1974	65,247	2,295,623	24,493	449,192,426	89,740	451,488,049
1975	112,401	8,202,991	362	3,618	112,763	8,206,609
1976	74,616	4,934,208	---	---	74,616	4,934,208
1977	80,529	7,820,947	---	---	80,529	7,820,947
1978	76,438	12,705,965	574	31,380	77,012	12,737,345
1979	62,447	7,597,171	6,475	816,008	68,922	8,413,179
1980	71,623	22,048,947	9,897	933,369	81,520	22,982,316
1981	126,070	103,314,389	60,034	25,358,616	186,104	128,673,005
1982	991,186	95,304,216	352,510	29,966,642	1,343,696	125,270,858
1983	131,702	31,150,106	173,694	30,958,099	305,396	62,108,205
1984	394,264	49,484,379	17,955	584,422	412,219	50,068,801
1985	517,612	47,367,665	4,444	227,094	522,056	47,594,759
1986	353,055	26,643,088	38,420	3,565,974	391,475	30,209,062
1987	211,488	33,345,494	6,333	1,407,220	217,821	34,752,714
1988	1,913,023	51,208,738	75,408	3,523,373	1,988,431	54,732,111
TOTAL	6,128,363	$540,804,705	1,284,874	$566,911,345	7,413,237	$1,107,716,050

NOTE: Fiscal year data from Public Land Statistics, 1988, Bureau of Land Management.

INDIAN MINERAL REVENUES

Indian royalties and rents increased 7.1 percent, from $106 million in 1987 to $113.5 million in 1988 (tables 1 and 2). Indian revenues addressed in this publication, exclude the Osage Nation. The Osage Nation manages all mineral leases on its Tribal lands and collects its own revenues.

Indian oil production fell 11.1 percent from 1987 to 1988; however, oil royalties dropped 21.3 percent, or $9.8 million, from $45.8 million in 1987 to $36 million in 1988. The decline is associated with the reduction in oil prices during the year. Indian gas production fell 4.1 percent in 1988. Gas royalties remained stable at $22.5 million (figure 18 and table 25).

Indian coal production rose 9.3 percent in 1988; however, coal royalties jumped 53.2 percent, or $16.2 million, from $30.5 million in 1987 to $46.7 million in 1988 (figure 18 and table 25). The significant rise in royalties is principally associated with the renegotiation of a number of coal contracts from a cents-per-ton basis to an ad valorem basis during the year. Accelerated public utility conversion from hydroelectric power to coal, due to drought conditions in Canada and the United States, further contributed to the increase.

Royalties from other mineral production increased 12.8 percent, from $6.3 million in 1987 to $7.1 million in 1988 (table 25). Increased revenues from copper, phosphate, and sand and gravel were offset, in part, by a decline in collections from gas plant products (table 26).

Receipts from Indian rents remained stable during the year at nearly $1.3 million (tables 1 and 2).

There were 9,977 mineral leases, licenses, permits, and applications on Indian Tribal and allotted lands administered by the Department of the Interior in 1988. This number includes 9,696 oil and gas actions and 281 coal, uranium, and other minerals actions (table 35). There were 4,349 producing or producible Indian oil and gas leases on 1.6 million acres as of December 31, 1988 (table 31).

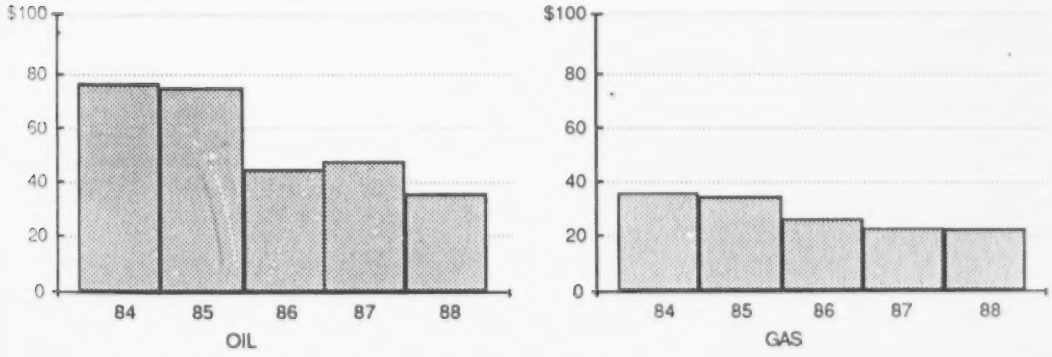


Figure 18. --- Royalties, in millions, from Indian mineral leases, 1984-1988

Navajo student on survey team, Navajo Reservation. (Photo courtesy USGS.)

Indian Tribes and Nations Served by the Minerals Management Service through the Bureau of Indian Affairs

Absentee Shawnee
Apache
Arapahoe
Assiniboine
Assiniboine Sioux
Blackfeet
Caddo
Cherokee
Cheyenne Arapaho
Cheyenne River Sioux
Chickasaw
Chippewa-Cree
Choctaw
Citizen Band of Potawatomi
Clackamas
Comanche
Creek
Crow
Delaware
Hopi
Iowa
Jicarilla Apache
Kickapoo
Kiowa
Laguna Pueblo
Navajo
Nez Perce
Northern Ute
Osage
Otoe
Paiute
Pala Band-Mission Indians
Papago
Pawnee
Pima
Ponca
Potawatomi
Quapaw
Sac and Fox
Saginaw Chippewa
Sandia Pueblo
San Felipe Pueblo
San Ildefonso Pueblo
Seminole
Shawnee
Shoshone
Southern Ute
Spokane
Taos Pueblo
Three Affiliated Tribes:
Arikara
Hidatsa
Mandan
Turtle Mountain Band of Chippewa
Turtle Mountain Chippewa
Ute Mountain Ute
Wichita
Yakima
Yavapai

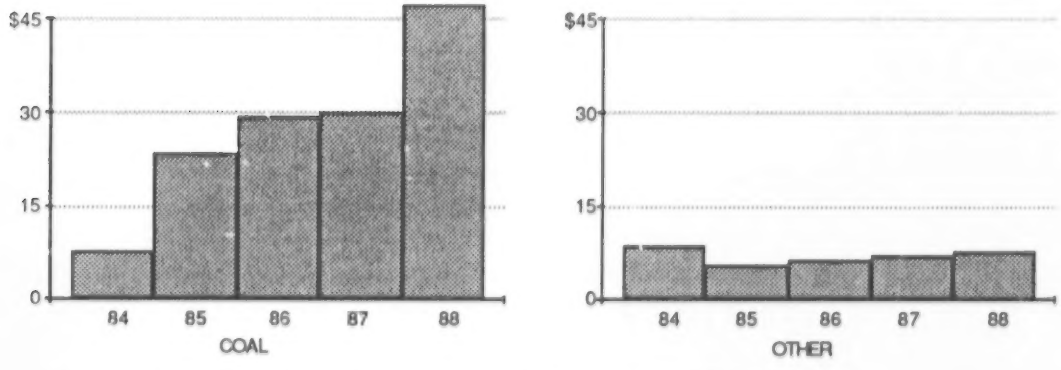


Figure 18. --- Royalties, in millions, from Indian mineral leases, 1984-1988 (continued)

Table 25.--Summary of volume, market value, and royalties by State and commodity from Indian mineral leases, 1937-88

	1937-83	1984	1985	1986	1987	1988	1937-88
ALASKA							
GAS IN MCF							
Volume	277,556	0	0	0	0	0	277,556
Market Value	$ 39,269	$ 0	$ 0	$ 0	$ 0	$ 0	$ 39,269
Royalties	$ 6,541	$ 0	$ 0	$ 0	$ 0	$ 0	$ 6,541
TOTAL ROYALTIES							
ALL MINERALS	$ 6,541	$ 0	$ 0	$ 0	$ 0	$ 0	$ 6,541

	1937-83	1984	1985	1986	1987	1988	1937-88
ARIZONA							
OIL IN BARRELS							
Volume	18,679,144	197,821	171,633	164,464	135,709	108,734	19,457,505
Market Value	$ 97,269,355	$ 5,548,19[illegible]	$ 4,616,635	$ 2,589,452	$ 2,330,655	$ 1,654,596	$ 114,008,885
Royalties	$ 15,806,067	$ 890,668	$ 748,948	$ 423,267	$ 381,290	$ 272,042	$ 18,522,279
GAS IN MCF							
Volume	12,771,539	50,898	19,900	17,294	15,254	7,517	12,882,402
Market Value	$ 2,580,955	$ 97,216	$ 25,829	$ 11,760	$ 14,963	$ 8,042	$ 2,738,765
Royalties	$ 324,334	$ 12,152	$ 3,234	$ 1,446	$ 1,870	$ 1,005	$ 344,041
COAL IN TONS							
Volume	109,477,738	10,021,358	9,625,000	11,550,000	11,602,674	12,318,335	164,595,105
Market Value	$1,073,586,900	$146,938,153	$179,506,250	$184,684,500	$124,925,051	$238,341,308	$1,947,982,168
Royalties	$ 37,862,307	$ 4,139,210	$ 8,551,697	$ 9,078,969	$ 5,887,427	$ 21,739,989	$ 87,259,599
OTHER PRODUCTS							
Market Value	$ 294,738,082	$ 6,327,705	$ 5,969,796	$ 12,161,076	$ 17,927,276	$ 18,141,340	$ 355,265,275
Royalties	$ 27,546,040	$ 1,663,185	$ 909,346	$ 1,212,695	$ 2,176,490	$ 2,914,098	$ 36,451,854
TOTAL ROYALTIES							
ALL MINERALS	$ 81,538,748	$ 6,705,212	$ 10,213,225	$ 10,716,377	$ 8,447,077	$ 24,957,134	$ 142,577,773

	1937-83	1984	1985	1986	1987	1988	1937-88
CALIFORNIA							
OTHER PRODUCTS							
Market Value	$ 15,930,944	$ 0	$ 5,771,008	$ 2,771,676	$ 3,724,398	$ 3,780,110	$ 32,978,136
Royalties	$ 1,571,911	$ 0	$ 721,376	$ 346,460	$ 446,928	$ 452,022	$ 3,538,697
TOTAL ROYALTIES							
ALL MINERALS	$ 1,571,911	$ 0	$ 721,376	$ 346,460	$ 446,928	$ 452,022	$ 3,538,697

Table 25.--Summary of volume, market value, and royalties by State and commodity from Indian mineral leases, 1937-88 (cont.)

	1937-83	1984	1985	1986	1987	1988	1937-88
COLORADO							
OIL IN BARRELS							
Volume	3,008,769	109,455	536,535	588,257	318,938	298,018	4,859,972
Market Value	$ 14,724,288	$ 3,090,423	$ 13,922,837	$ 10,310,421	$ 5,198,591	$ 4,785,313	$ 52,031,873
Royalties	$ 2,127,722	$ 475,077	$ 2,101,990	$ 1,749,512	$ 954,293	$ 766,856	$ 8,175,450
GAS IN MCF							
Volume	484,857,650	14,961,021	13,945,739	17,829,157	18,989,709	20,743,420	571,326,696
Market Value	$ 213,849,843	$ 35,199,943	$ 31,026,532	$ 34,846,076	$ 37,125,686	$ 37,274,001	$ 389,322,081
Royalties	$ 26,992,481	$ 4,418,475	$ 3,976,224	$ 4,511,366	$ 4,787,410	$ 4,663,647	$ 49,349,603
COAL IN TONS							
Volume	1,659	0	0	0	0	0	1,659
Market Value	$ 7,723	$ 0	$ 0	$ 0	$ 0	$ 0	$ 7,723
Royalties	$ 198	$ 0	$ 0	$ 0	$ 0	$ 0	$ 198
OTHER PRODUCTS							
Market Value	$ 978,443	$ 658,248	$ 663,614	$ 589,285	$ 355,423	$ 99,965	$ 3,344,978
Royalties	$ 117,336	$ 61,486	$ 98,438	$ 102,132	$ 54,367	$ 12,344	$ 446,102
TOTAL ROYALTIES							
ALL MINERALS	$ 29,237,737	$ 4,955,037	$ 6,176,652	$ 6,363,010	$ 5,796,070	$ 5,442,847	$ 57,971,353

	1937-83	1984	1985	1986	1987	1988	1937-88
FLORIDA							
OIL IN BARRELS							
Volume	4,688	0	0	0	0	0	4,688
Market Value	$ 51,367	$ 0	$ 0	$ 0	$ 0	$ 0	$ 51,367
Royalties	$ 6,422	$ 0	$ 0	$ 0	$ 0	$ 0	$ 6,422
OTHER PRODUCTS							
Market Value	$ 451,024	$ 0	$ 0	$ 0	$ 0	$ 0	$ 451,024
Royalties	$ 45,103	$ 0	$ 0	$ 0	$ 0	$ 0	$ 45,103
TOTAL ROYALTIES							
ALL MINERALS	$ 51,525	$ 0	$ 0	$ 0	$ 0	$ 0	$ 51,525

	1937-83	1984	1985	1986	1987	1988	1937-88
IDAHO							
OTHER PRODUCTS							
Market Value	$ 172,562,573	$ 0	$ 7,524,960	$ 20,026,962	$ 18,231,839	$ 20,562,230	$ 238,908,564
Royalties	$ 14,867,865	$ 0	$ 752,496	$ 2,461,808	$ 2,278,980	$ 2,365,726	$ 22,726,875
TOTAL ROYALTIES							
ALL MINERALS	$ 14,867,865	$ 0	$ 752,496	$ 2,461,808	$ 2,278,980	$ 2,365,726	$ 22,726,875

Table 25.--Summary of volume, market value, and royalties by State and commodity from Indian mineral leases, 1937-88 (cont.)

	1937-83	1984	1985	1986	1987	1988	1937-88
MICHIGAN							
OIL IN BARRELS							
Volume	30,473	5,645	1,704	2,127	1,307	1,502	42,758
Market Value	$ 126,492	$ 163,468	$ 44,676	$ 37,483	$ 22,638	$ 24,240	$ 418,997
Royalties	$ 18,623	$ 18,886	$ 5,618	$ 6,432	$ 2,982	$ 3,550	$ 56,091
GAS IN MCF							
Volume	0	0	0	1,030	108	22,072	23,210
Market Value	$ 0	$ 0	$ 0	$ 670	$ 63	$ 21,189	$ 21,922
Royalties	$ 0	$ 0	$ 0	$ 28	$ 8	$ 2,649	$ 2,685
TOTAL ROYALTIES							
ALL MINERALS	$ 18,623	$ 18,886	$ 5,618	$ 6,460	$ 2,990	$ 6,199	$ 58,776

	1937-83	1984	1985	1986	1987	1988	1937-88
MINNESOTA							
OTHER PRODUCTS							
Market Value	$ 178,461	$ 0	$ 0	$ 0	$ 0	$ 0	$ 178,461
Royalties	$ 6,455	$ 0	$ 0	$ 0	$ 0	$ 0	$ 6,455
TOTAL ROYALTIES							
ALL MINERALS	$ 6,455	$ 0	$ 0	$ 0	$ 0	$ 0	$ 6,455

	1937-83	1984	1985	1986	1987	1988	1937-88
MONTANA							
OIL IN BARRELS							
Volume	85,226,020	1,688,022	1,285,787	1,591,378	1,259,170	1,053,218	92,103,595
Market Value	$ 426,061,083	$ 40,535,402	$ 38,969,540	$ 24,436,384	$ 20,179,391	$ 14,936,681	$ 565,118,481
Royalties	$ 58,359,239	$ 4,796,205	$ 5,335,189	$ 3,324,434	$ 2,846,750	$ 2,232,566	$ 76,894,383
GAS IN MCF							
Volume	21,035,097	1,462,384	1,636,524	1,412,892	1,177,288	1,407,422	28,131,607
Market Value	$ 14,610,125	$ 3,258,779	$ 3,771,299	$ 3,236,678	$ 2,178,272	$ 2,313,424	$ 29,368,577
Royalties	$ 2,261,584	$ 422,220	$ 595,016	$ 461,908	$ 313,201	$ 330,412	$ 4,387,341
COAL IN TONS							
Volume	35,515,829	3,349,578	2,949,283	1,168,836	1,231,669	1,926,826	46,142,021
Market Value	$ 263,384,787	$ 43,478,876	$ 32,667,157	$ 13,378,181	$ 10,987,034	$ 14,990,558	$ 378,886,593
Royalties	$ 17,109,591	$ 1,557,407	$ 2,015,896	$ 812,464	$ 708,859	$ 1,126,593	$ 23,630,810
OTHER PRODUCTS							
Market Value	$ 16,975,356	$ 114,805	$ 145,029	$ 101,786	$ 4,872	$ 14,601	$ 17,356,449
Royalties	$ 973,987	$ 10,508	$ 22,860	$ 15,893	$ 700	$ 910	$ 1,032,855
TOTAL ROYALTIES							
ALL MINERALS	$ 79,007,401	$ 6,794,340	$ 7,968,961	$ 4,614,696	$ 3,869,510	$ 3,690,481	$ 105,945,389

Table 25.--Summary of volume, market value, and royalties by State and commodity from Indian mineral leases, 1937-88 (cont.)

	1937-83	1984	1985	1986	1987	1988	1937-88
NEVADA							
OTHER PRODUCTS							
Market Value	$ 3,330,226	$ 0	$ 0	$ 1,748,149	$ 1,292,587	$ 1,956,496	$ 8,327,458
Royalties	$ 325,924	$ 0	$ 0	$ 167,822	$ 102,684	$ 156,701	$ 753,131
TOTAL ROYALTIES							
ALL MINERALS	$ 325,924	$ 0	$ 0	$ 167,822	$ 102,684	$ 156,701	$ 753,131

	1937-83	1984	1985	1986	1987	1988	1937-88
NEW MEXICO							
OIL IN BARRELS							
Volume	99,521,460	1,025,645	990,437	1,803,995	2,363,197	1,932,611	107,637,345
Market Value	$ 623,409,595	$ 22,223,798	$ 23,588,900	$ 20,201,618	$ 38,333,688	$ 26,333,852	$ 754,091,451
Royalties	$ 86,541,346	$ 3,262,278	$ 3,346,731	$ 2,743,651	$ 5,115,260	$ 3,587,417	$ 104,596,683
GAS IN MCF							
Volume	1,567,214,177	22,295,531	23,912,359	16,225,790	16,571,091	19,053,982	1,665,272,930
Market Value	$1,012,881,083	$ 69,737,745	$ 73,237,131	$ 47,300,933	$ 35,469,326	$ 36,611,000	$1,275,237,218
Royalties	$ 131,753,547	$ 9,519,558	$ 9,683,090	$ 6,176,038	$ 4,695,317	$ 4,809,241	$ 166,636,791
COAL IN TONS							
Volume	127,245,951	7,153,096	12,789,903	10,210,329	11,157,838	11,984,923	180,542,040
Market Value	$ 835,534,499	$ 71,676,710	$229,215,685	$209,236,271	$306,648,588	$237,139,427	$1,889,451,180
Royalties	$ 23,048,537	$ 1,917,142	$ 12,835,743	$ 19,585,540	$ 23,885,088	$ 23,825,185	$ 105,097,235
OTHER PRODUCTS							
Market Value	$ 630,586,377	$ 58,259,797	$ 10,582,118	$ 3,223,336	$ 2,749,069	$ 4,732,756	$ 710,133,453
Royalties	$ 95,356,492	$ 4,239,471	$ 1,185,068	$ 399,487	$ 343,865	$ 585,752	$ 102,110,135
TOTAL ROYALTIES							
ALL MINERALS	$ 336,699,922	$ 18,938,449	$ 27,050,632	$ 28,904,716	$ 34,039,530	$ 32,807,595	$ 478,440,844

Table 25.--Summary of volume, market value, and royalties by State and commodity from Indian mineral leases, 1937-88 (cont.)

	1937-83	1984	1985	1986	1987	1988	1937-88
NORTH DAKOTA							
OIL IN BARRELS							
Volume	8,682,759	148,085	103,619	94,303	114,391	127,483	9,270,640
Market Value	$ 39,202,995	$ 4,279,034	$ 2,543,881	$ 1,420,936	$ 1,944,077	$ 1,896,403	$ 51,287,326
Royalties	$ 5,134,744	$ 567,985	$ 393,507	$ 191,603	$ 272,804	$ 275,635	$ 6,836,278
GAS IN MCF							
Volume	10,203,443	130,126	141,227	30,002	190,826	140,620	10,836,244
Market Value	$ 1,415,115	$ 118,233	$ 109,407	$ 24,256	$ 124,586	$ 125,150	$ 1,916,747
Royalties	$ 180,445	$ 15,033	$ 15,891	$ 3,324	$ 19,824	$ 16,334	$ 246,852
COAL IN TONS							
Volume	2,921	0	0	0	0	0	2,921
Market Value	$ 8,834	$ 0	$ 0	$ 0	$ 0	$ 0	$ 8,834
Royalties	$ 540	$ 0	$ 0	$ 0	$ 0	$ 0	$ 540
OTHER PRODUCTS							
Market Value	$ 4,893,522	$ 90,381	$ 22,705	$ 1,335	$ 23,955	$ 137,263	$ 5,169,161
Royalties	$ 366,106	$ 11,353	$ 2,849	$ 167	$ 2,994	$ 13,412	$ 396,881
TOTAL ROYALTIES							
ALL MINERALS	$ 5,681,836	$ 594,371	$ 412,247	$ 195,094	$ 291,622	$ 305,381	$ 7,480,551

	1937-83	1984	1985	1986	1987	1988	1937-88
OKLAHOMA							
OIL IN BARRELS							
Volume	350,507,968	4,119,320	4,076,889	4,086,478	3,764,771	3,221,375	369,776,801
Market Value	$1,421,995,641	$123,306,661	$102,314,611	$ 61,392,515	$ 65,121,512	$ 49,782,893	$1,823,913,833
Royalties	$ 178,782,463	$ 15,893,918	$ 13,694,100	$ 8,046,769	$ 8,433,077	$ 6,523,640	$ 231,373,967
GAS IN MCF							
Volume	741,463,300	46,175,485	44,916,022	45,096,525	57,375,400	45,578,928	980,605,660
Market Value	$ 484,911,236	$160,375,885	$150,468,667	$102,710,719	$ 81,475,935	$ 71,473,941	$1,051,416,383
Royalties	$ 72,360,770	$ 17,186,131	$ 15,799,212	$ 10,172,241	$ 8,636,325	$ 8,464,378	$ 132,619,057
COAL IN TONS							
Volume	9,375,686	0	0	0	0	0	9,375,686
Market Value	$ 37,232,091	$ 0	$ 0	$ 0	$ 0	$ 0	$ 37,232,091
Royalties	$ 1,050,777	$ 0	$ 0	$ 0	$ 0	$ 0	$ 1,050,777
OTHER PRODUCTS							
Market Value	$ 310,320,403	$ 1,673,209	$ 1,434,183	$ 1,321,352	$ 2,602,963	$ 2,742,994	$ 320,095,104
Royalties	$ 23,675,652	$ 190,510	$ 204,204	$ 139,978	$ 303,188	$ 202,080	$ 24,715,612
TOTAL ROYALTIES							
ALL MINERALS	$ 275,869,662	$ 33,270,559	$ 29,697,516	$ 18,358,988	$ 17,372,590	$ 15,190,098	$ 389,759,413

Table 25.--Summary of volume, market value, and royalties by State and commodity from Indian mineral leases, 1937-88 (cont.)

	1937-83	1984	1985	1986	1987	1988	1937-88
SOUTH DAKOTA							
OIL IN BARRELS							
Volume	66,694	5,676	3,299	841	6,375	6,389	89,274
Market Value	$ 928,999	$ 152,520	$ 74,181	$ 17,038	$ 88,770	$ 72,719	$ 1,334,227
Royalties	$ 154,832	$ 29,140	$ 14,089	$ 3,408	$ 17,754	$ 14,544	$ 233,767
COAL IN TONS							
Volume	15,876	0	0	0	0	0	15,876
Market Value	$ 72,302	$ 0	$ 0	$ 0	$ 0	$ 0	$ 72,302
Royalties	$ 3,175	$ 0	$ 0	$ 0	$ 0	$ 0	$ 3,175
OTHER PRODUCTS							
Market Value	$ 5,950,624	$ 0	$ 0	$ 0	$ 0	$ 0	$ 5,950,624
Royalties	$ 474,609	$ 0	$ 0	$ 0	$ 0	$ 0	$ 474,609
TOTAL ROYALTIES							
ALL MINERALS	$ 632,616	$ 29,140	$ 14,089	$ 3,408	$ 17,754	$ 14,544	$ 711,551

	1937-83	1984	1985	1986	1987	1988	1937-88
UTAH							
OIL IN BARRELS							
Volume	370,813,879	10,871,207	9,541,767	8,182,235	7,800,045	7,161,520	414,370,653
Market Value	$2,383,739,442	$295,333,299	$244,070,958	$128,820,858	$138,514,859	$109,382,351	$3,299,861,767
Royalties	$ 368,129,597	$ 37,188,013	$ 34,425,187	$ 18,824,315	$ 19,858,199	$ 16,217,370	$ 494,642,681
GAS IN MCF							
Volume	257,156,392	6,392,827	9,983,743	6,896,952	6,953,376	4,828,629	292,211,919
Market Value	$ 166,315,898	$ 22,144,211	$ 26,130,179	$ 16,523,387	$ 13,800,057	$ 9,691,972	$ 254,605,704
Royalties	$ 26,615,705	$ 2,873,495	$ 3,164,970	$ 2,322,417	$ 2,015,060	$ 1,586,466	$ 38,578,113
OTHER PRODUCTS							
Market Value	$ 146,549,365	$ 8,282,561	$ 8,474,699	$ 6,771,898	$ 3,480,708	$ 2,774,385	$ 176,333,616
Royalties	$ 7,683,998	$ 1,187,251	$ 1,211,113	$ 985,901	$ 499,509	$ 311,171	$ 11,878,943
TOTAL ROYALTIES							
ALL MINERALS	$ 402,429,300	$ 41,248,759	$ 38,801,270	$ 22,132,633	$ 22,372,768	$ 18,115,007	$ 545,099,737

	1937-83	1984	1985	1986	1987	1988	1937-88
WASHINGTON							
GAS IN MCF							
Volume	2,939	0	0	0	0	0	2,939
Market Value	$ 1,170	$ 0	$ 0	$ 0	$ 0	$ 0	$ 1,170
Royalties	$ 146	$ 0	$ 0	$ 0	$ 0	$ 0	$ 146
OTHER PRODUCTS							
Market Value	$ 48,503,788	$ 46,303	$ 110,313	$ 63,732	$ 33,456	$ 33,261	$ 48,790,853
Royalties	$ 4,987,756	$ 20,356	$ 13,789	$ 7,967	$ 4,182	$ 4,264	$ 5,038,314
TOTAL ROYALTIES							
ALL MINERALS	$ 4,987,902	$ 20,356	$ 13,789	$ 7,967	$ 4,182	$ 4,264	$ 5,038,460

Table 25.--Summary of volume, market value, and royalties by State and commodity from Indian mineral leases, 1937-88 (cont.)

	1937-83	1984	1985	1986	1987	1988	1937-88
WISCONSIN							
OTHER PRODUCTS							
Market Value	$ 40,711	$ 0	$ 0	$ 0	$ 0	$ 0	$ 40,711
Royalties	$ 3,271	$ 0	$ 0	$ 0	$ 0	$ 0	$ 3,271
TOTAL ROYALTIES							
ALL MINERALS	$ 3,271	$ 0	$ 0	$ 0	$ 0	$ 0	$ 3,271

	1937-83	1984	1985	1986	1987	1988	1937-88
WYOMING							
OIL IN BARRELS							
Volume	233,974,889	3,630,471	3,720,942	3,463,830	3,225,966	2,965,278	250,981,376
Market Value	$1,071,318,039	$ 90,254,288	$ 89,822,625	$ 45,987,552	$ 50,040,829	$ 38,141,657	$1,385,564,990
Royalties	$ 149,173,929	$ 12,850,855	$ 14,960,615	$ 7,106,979	$ 7,931,388	$ 6,153,059	$ 198,176,825
GAS IN MCF							
Volume	289,966,554	8,648,553	8,350,351	10,215,245	6,272,923	11,330,346	334,783,972
Market Value	$ 171,681,276	$ 19,632,231	$ 19,374,653	$ 22,678,369	$ 12,418,389	$ 17,838,303	$ 263,623,221
Royalties	$ 25,794,155	$ 2,848,084	$ 2,615,532	$ 3,615,217	$ 1,775,283	$ 2,617,909	$ 39,266,180
OTHER PRODUCTS							
Market Value	$ 5,664,690	$ 237,477	$ 259,686	$ 213,547	$ 263,178	$ 54,103	$ 6,692,681
Royalties	$ 446,792	$ 112,852	$ 20,690	$ 27,023	$ 38,227	$ 3,701	$ 649,285
TOTAL ROYALTIES							
ALL MINERALS	$ 175,414,876	$ 15,811,791	$ 17,596,837	$ 10,749,219	$ 9,744,898	$ 8,774,669	$ 238,092,290

	1937-83	1984	1985	1986	1987	1988	1937-88
INDIAN TOTALS							
OIL IN BARRELS							
Volume	1,170,516,743	21,801,347	20,432,612	19,977,908	18,989,869	16,876,128	1,268,594,607
Market Value	$6,078,827,296	$584,887,085	$519,968,844	$295,214,257	$321,775,010	$247,010,705	$8,047,683,197
Royalties	$ 864,234,984	$ 75,973,022	$ 75,025,974	$ 42,420,370	$ 45,813,797	$ 36,046,679	$1,139,514,826
GAS IN MCF							
Volume	3,384,948,647	100,116,825	102,905,865	97,724,887	107,545,975	103,112,936	3,896,355,135
Market Value	$2,068,285,970	$310,564,243	$304,143,697	$227,332,848	$182,607,277	$175,357,022	$3,268,291,057
Royalties	$ 286,292,709	$ 37,295,148	$ 35,853,169	$ 27,263,985	$ 22,240,298	$ 22,492,041	$ 431,437,350
COAL IN TONS							
Volume	281,535,660	20,524,032	25,364,186	22,929,165	23,992,181	26,230,084	400,575,308
Market Value	$2,209,827,142	$262,093,739	$441,389,092	$407,298,952	$442,560,673	$490,471,293	$4,253,640,891
Royalties	$ 79,375,125	$ 7,613,759	$ 23,403,336	$ 29,476,973	$ 30,481,374	$ 46,691,767	$ 217,042,334
OTHER PRODUCTS							
Market Value	$1,658,654,589	$ 75,690,486	$ 40,958,111	$ 48,994,134	$ 50,689,724	$ 55,029,504	$1,930,016,548
Royalties	$ 178,449,297	$ 7,504,971	$ 5,142,229	$ 5,867,330	$ 6,252,114	$ 7,052,181	$ 210,268,122
TOTAL ROYALTIES							
ALL MINERALS	$1,408,352,115	$128,386,900	$139,424,708	$105,028,658	$104,787,583	$112,282,668	$1,998,262,632

Table 26.--1988 volume, market value, and royalties by commodity and State from Indian mineral leases

	Production Volume	Market Value	Royalties Received
CHAT			
Oklahoma	307,175	$ 844,732	$ 90,994
COAL			
Arizona	12,318,335	$238,341,308	$ 21,739,989
Montana	1,926,826	14,990,558	1,126,593
New Mexico	11,984,923	237,139,427	23,825,185
Subtotal	26,230,084	$490,471,293	$ 46,691,767
COPPER			
Arizona	18,292	$ 11,679,951	$ 1,530,209
GAS			
Arizona	7,517	$ 8,042	$ 1,005
Colorado	20,743,420	37,274,001	4,663,647
Michigan	22,072	21,189	2,649
Montana	1,407,422	2,313,424	330,412
New Mexico	19,053,982	36,611,000	4,809,241
North Dakota	140,620	125,150	16,334
Oklahoma	45,578,928	71,473,941	8,464,378
Utah	4,828,629	9,691,972	1,586,466
Wyoming	11,330,346	17,838,303	2,617,909
Subtotal	103,112,936	$175,357,022	$ 22,492,041
GAS LOST			
New Mexico	63,842	$ 106,407	$ 15,062
GAS PLANT PRODUCTS			
Colorado	578,213	$ 99,965	$ 12,344
Montana	42,974	14,601	910
New Mexico	7,480,375	1,597,851	179,134
North Dakota	654,896	130,463	12,974
Oklahoma	2,744,611	1,177,521	75,089
Utah	12,449,655	2,774,385	311,171
Wyoming	204,071	54,103	3,701
Subtotal	24,154,795	$ 5,848,889	$ 595,323
GYPSUM			
New Mexico	17,981	$ 261,656	$ 11,684

Table 26.--1988 volume, market value, and royalties by commodity and State from Indian mineral leases (cont.)

	Production Volume	Market Value	Royalties Received
HELIUM			
New Mexico	475,638	$ 142,691	$ 23,687
LIMESTONE			
Oklahoma	114,576	$ 406,746	$ 10,747
OIL			
Arizona	108,734	$ 1,654,596	$ 272,042
Colorado	298,018	4,785,313	766,856
Michigan	1,502	24,240	3,550
Montana	1,053,218	14,936,681	2,232,566
New Mexico	1,932,611	26,333,852	3,587,417
North Dakota	127,483	1,896,403	275,635
Oklahoma	3,221,375	49,782,893	6,523,640
South Dakota	6,389	72,719	14,544
Utah	7,161,520	109,382,351	16,217,370
Wyoming	2,965,278	38,141,657	6,153,059
Subtotal	16,876,128	$247,010,705	$ 36,046,579
PHOSPHATE			
Idaho	1,656,908	$ 20,562,230	$ 2,365,726
SAND AND GRAVEL			
Arizona	2,587,830	$ 6,459,142	$ 1,413,665
California	1,024,420	3,780,110	452,022
Nevada	507,321	1,956,496	156,701
New Mexico	747,621	2,624,152	356,186
Oklahoma	209,330	313,995	25,250
Washington	8,528	33,261	4,264
Subtotal	5,085,050	$ 15,167,156	$ 2,408,088
SCORIA			
Arizona	449	$ 2,247	$ 225
SULFUR			
North Dakota	178	$ 6,799	$ 436
TOTAL		$967,868,524	$112,282,668

DISTRIBUTION OF FEDERAL AND INDIAN MINERAL REVENUES

Revenues collected from mineral leasing on Federal lands were distributed to States, to the General Fund of the U.S. Treasury, and to a number of designated special-purpose accounts. Revenues collected from Indian leases were disbursed by the Bureau of Indian Affairs (BIA) to the appropriate Indian Tribes and allottees. Formulas for these disbursements are established by law.

The General Fund of the U.S. Treasury received 58.7 percent, or $2.6 billion, of all revenues in Fiscal Year (FY) 1988. Payments to three special-purpose accounts amounted to $1.3 billion, or 29.6 percent, of total mineral revenues. Another $397.6 million, or 8.9 percent, was disbursed to 29 States. Indian revenues directed to Tribal governments and individual allotment owners equaled 2.8 percent, or $125.4 million (figure 19).

The Mineral Lands Leasing Act of 1920 provides that States whose boundaries encompass Federal mineral leases will share in the revenues from those leases. Royalty, rental, and bonus revenues totaling $397.6 million were distributed to 29 mineral-producing States in FY 1988. Six western States, including California, Colorado, Montana, New Mexico, Utah, and Wyoming, received 92.8 percent of the funds (figure 20 and table 27).

The periodic disbursement of all mineral royalty, rent, and bonus receipts is governed by legislation and regulations. All mineral revenues shared with the States have been disbursed each month since October 1, 1983, under the provisions of section 104 of the Federal Oil and Gas Royalty Management Act of 1982 (FOGRMA). Tribal and allottee revenues, by law, must be processed and distributed to BIA for disbursement to Indian accounts as quickly as possible after receipt.

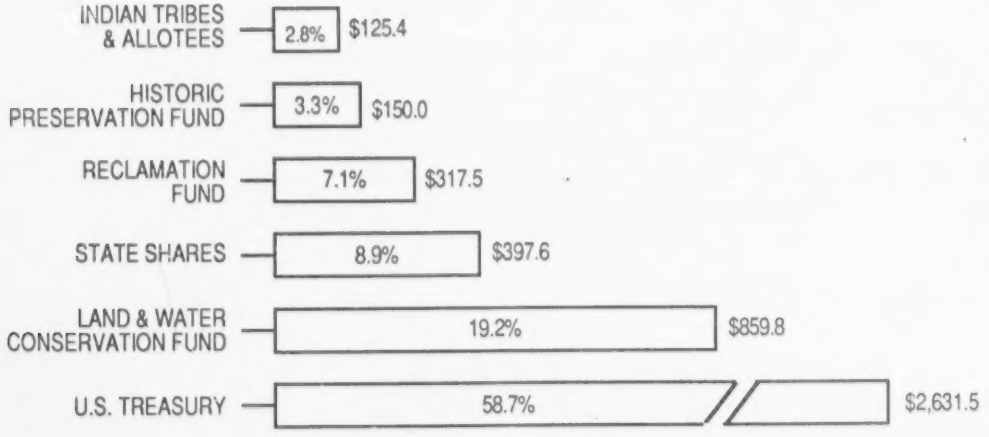


Figure 19. --- Fiscal year 1988 disbursement of mineral revenues, in millions, from Federal and Indian mineral leases

RMP employee monitors network control system in headquarters computer facility.

The Department of the Interior must pay interest to States and Indians on royalties that were not disbursed in a timely manner in accordance with section 111 of FOGRMA. Interest paid for late disbursements to States totaled $191,000 in FY 1988. All payments to Indians were made in a timely manner, resulting in no interest accruals during the year.

A total of $370.1 million in Outer Continental Shelf (OCS) royalties and escrow funds was released to seven States in FY 1988 as part of the settlement under the provisions of the OCS Lands Act Amendments of 1985 (table 29). These funds are not included in any other table in this report.

Outer Continental Shelf Lands

Royalty revenues from Federal offshore leases on the OCS are distributed to the Land and Water Conservation Fund, the Historic Preservation Fund, and the General Fund of the U.S. Treasury. Transfers are made in each fiscal year from OCS royalties, rents, and bonuses in order to maintain the Land and Water Conservation Fund's annual authorization of $900 million. These transfers amounted to $789 million in FY 1984, $766 million in FY 1985, $775 million in FY 1986, $823.6 million in FY 1987, and $859.8 million in FY 1988. Transfers to the Historic Preservation Fund from OCS royalties, rents, and bonuses amounted to $150 million annually between FY 1984-1988. The balance of offshore royalties goes into the Windfall Profit Tax (WPT) account and the General Fund of the U.S. Treasury.

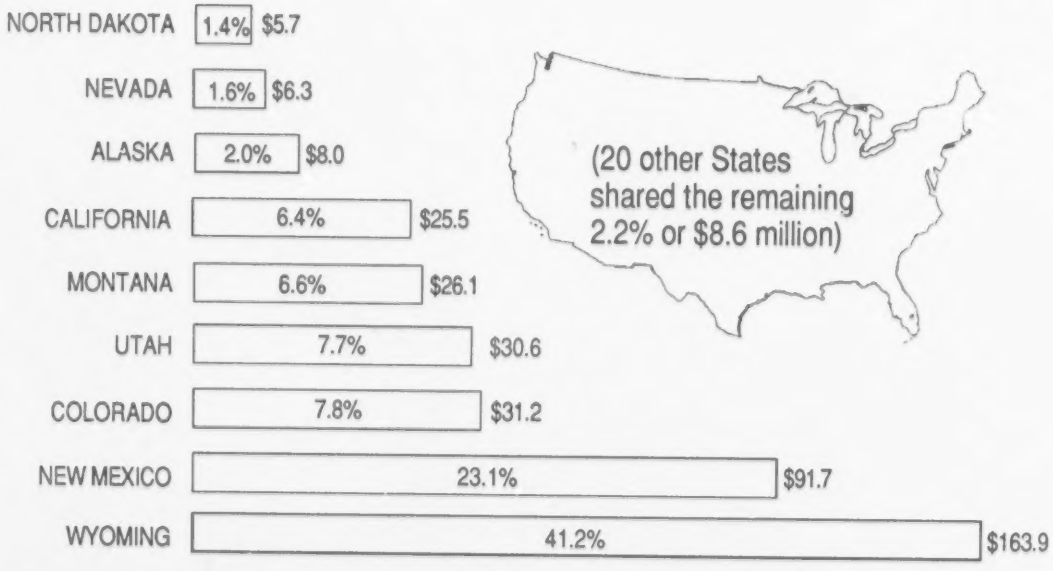


Figure 20. --- Fiscal year 1988 distribution to 29 States of $397.6 million in royalties and other revenues from Federal mineral leases

Public Lands

The royalty revenues collected from public lands leases are distributed directly to States or paid into either special funds or the General Fund of the U.S. Treasury.

States other than Alaska receive 50 percent of all royalties, rents, and bonuses collected from any public lands leases located within a State's boundaries. These revenues do not include WPT on crude oil, which is deducted before any allocation is made. Forty percent of the remaining mineral revenues from public lands leases is deposited in the Reclamation Fund, and 10 percent is directed to the General Fund of the U.S. Treasury.

Alaska receives 90 percent of all royalties, rents, and bonuses paid for mineral production on public lands leases in Alaska after deduction of payments and escrows paid under the provisions of the Alaska Native Claims Settlement Act of 1971, and of WPT on oil, where appropriate. The State further receives 50 percent of all royalties, rents, and bonuses collected from mineral production in the National Petroleum Reserve of Alaska.

Acquired Lands

All royalties, rents, and bonuses for leases issued under the 1947 Mineral Leasing Act for acquired lands are collected by the Minerals Management Service on behalf of the U.S. Forest Service of the Department of Agriculture. The revenues are disbursed as mandated by law.

Royalty revenues from leases within a national forest are distributed as follows: 65 percent to the General Fund of the U.S. Treasury; 25 percent to the State in which the mineral resource is produced; and 10 percent to the Forests, Roads, and Trails Fund.

Receipts from other acquired lands are deposited in a general Treasury account. The funds, in some instances, revert to the Agency that has administrative jurisdiction over the land.

Indian Lands

Royalties and rents from Indian Tribal and allottee lands leases are distributed to BIA, which, in turn, makes disbursements to the Tribes and to individual Indian allottees. The Osage Nation manages all mineral leases on its Tribal lands and collects its own revenues.

Military Lands

Royalty revenues collected from military lands leases issued before 1981 are deposited in the General Fund of the U.S. Treasury. Royalty revenue collections for leases issued beginning January 1, 1981, are handled in the same manner as revenues from public lands leases. Royalty revenues from all military lands leases amounted to $3.4 million in 1988.

Table 27.--Summary of mineral revenue shares distributed to the States by the Minerals Management Service and the Bureau of Land Management from Federal mineral leases, 1920-88

	State Shares by Fiscal Year in Thousands of Dollars							
	1920-83	1984	1985	1986	1987	1988		1920-88
Wyoming	$1,234,927	$204,598	$199,778	$152,872	$151,889	$163,908		$2,107,972
New Mexico	970,414	131,935	149,878	107,313	75,478	91,698		1,526,716
Colorado	365,667	47,049	42,751	41,847	37,033	31,176		565,523
Utah	268,859	32,084	34,771	27,574	24,235	30,624		418,147
Montana	146,271	22,295	21,140	17,998	27,407	26,068		261,179
California	267,703	49,307	41,833	33,080	27,829	25,526		445,278
Alaska	209,219	20,906	23,937	18,143	13,044	8,042		293,291
Nevada	63,887	8,484	9,903	7,020	5,136	6,266		100,696
North Dakota	33,658	10,464	9,482	7,441	6,814	5,738		73,597
Idaho	27,415	3,834	3,766	2,106	1,364	2,340		40,825
Oklahoma	16,352	2,160	2,916	2,575	1,596	1,621		27,220
Kansas	8,319	823	761	874	1,359	929		13,065
South Dakota	8,448	917	1,227	985	905	822		13,304
Oregon	10,110	1,983	1,761	1,213	687	565		16,319
Louisiana	8,786	905	795	555	517	545		12,103
Arkansas	24,207	712	718	624	309	517		27,087
Arizona	20,849	1,956	1,129	723	529	386		25,572
Washington	1,653	695	640	326	280	232		3,826
Michigan	439	201	44	40	56	173		953
Nebraska	1,098	325	320	269	170	156		2,338
Mississippi	7,771	538	1,073	513	184	104		10,183
Alabama	1,122	250	200	252	152	89		2,065
Virginia	---	---	---	---	18	18		36
Texas	1	9	11	9	7	8		45 *
Florida	646	207	73	91	28	4		1,049
Minnesota	1	1	2	3	3	2		12 *
Wisconsin	---	---	---	---	1	1		2 *
Ohio	---	3	---	---	---	---	**	3 *
Tennessee	8	5	---	---	---	---	**	13 *
West Virginia	---	---	28	---	---	---		28
TOTAL	$3,697,830	$542,646	$548,937	$424,446	$377,030	$397,558		$5,988,447

*Cumulative totals for these and certain other States may not include some small revenue shares that were disbursed during the previous decades.

**Ohio and Tennessee each received less than $500 in 1988.

NOTE: 1988 numbers represent actual payments to States and not allocations. Mandated distributions to the States are based on percentage shares in royalties, bonuses, and other mineral revenue collections. The States are ranked here by their 1988 shares of Federal mineral revenue disbursements. Interest accrued for late disbursements to States is included in the 1986-88 shares, but not in preceding years' shares.

SOURCES: Minerals Management Service records and Public Land Statistics, 1988, Bureau of Land Management.

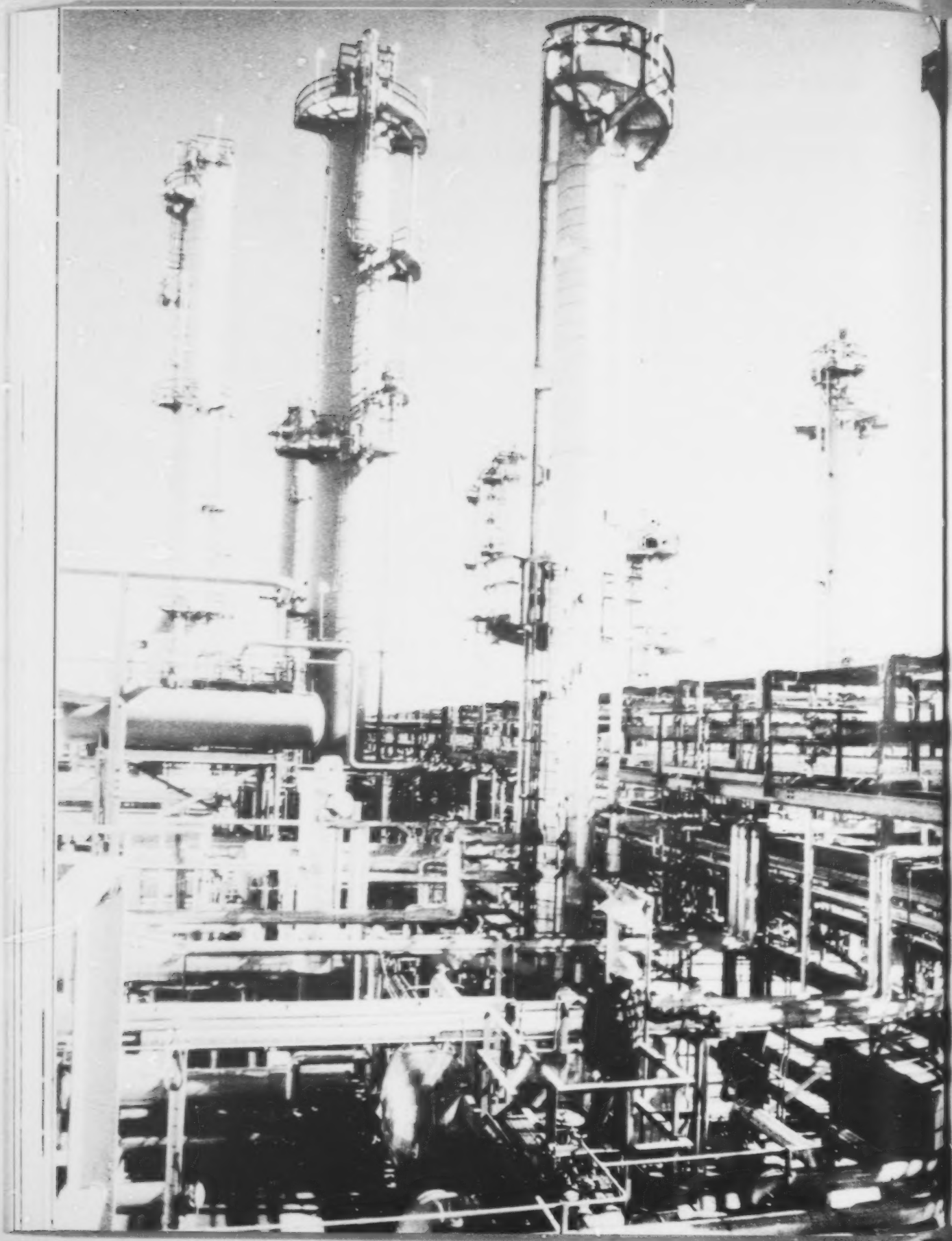
Table 28.--Summary of distribution of mineral revenue shares to other Federal agencies from acquired lands, 1985-88

	Agency Shares By Fiscal Year			
	1985-86	1987	1988	1985-88
U.S. Army Corps of Engineers	$ 5,033,867	$ 1,313,384	$ 621,309	$ 6,968,560
Department of Agriculture	113,225,974	47,591,946	44,717,622	205,535,542
TOTAL	$118,259,841	$48,905,330	$45,338,931	$212,504,102

NOTE: The distribution of mineral revenue shares to the States from acquired lands is made by the U.S. Army Corps of Engineers and the Department of Agriculture.

Table 29.--Distribution of OCS royalties and escrow funds under the provisions of the OCS Lands Act Amendments of 1985, Public Law 99-272, 1986-88

	State Shares By Fiscal Year			
	1986	1987	1988	1986-88
Alabama	$ 66,182,540	$ 276,188	$ 280,646	$ 66,739,374
Alaska	51,438,090	4,420,730	329,000,637	384,859,457
California	338,217,446	9,428,815	10,918,562	358,564,823
Florida	30,000	---	419	30,419
Louisiana	---	657,561,717	16,909,646	674,471,363
Mississippi	14,012,017	76,200	74,194	14,162,411
Texas	427,606,860	10,018,879	12,878,858	450,504,597
TOTAL	$897,486,953	$681,782,529	$370,062,962	$1,949,332,444



ROYALTY-IN-KIND

Under the Mineral Lands Leasing Act of 1920 and the Outer Continental Shelf Lands Act of 1953, the Federal Government, as lessor, may take part or all of its oil and gas royalties "in kind." The Secretary of the Interior, exercising discretionary authority, has historically determined that certain oil refiners do not have access to a secure supply of crude. The Federal Government may direct Federal lessees to pay their royalty shares in crude oil, rather than "in value" as cash. The Government, in turn, sells the royalty-in-kind (RIK) oil at fair-market value to eligible refiners. Contracts with these refiners are ordinarily made for a period of 3 years.

Two offshore contractors participated in the RIK program in 1988. They collectively purchased less than 1 million barrels of RIK crude with a royalty value of $8 million. This represents 26-percent decline in offshore royalty value from 1987 (table 30).

Four onshore contractors continued participation in the RIK program in 1988. They collectively purchased 6.9 million barrels of RIK crude with a royalty value of $94.3 million. This reflects a 13.7-percent increase in onshore royalty value over a corresponding figure of $83 million in 1987 (table 30).

Total RIK crude, with a royalty value of nearly $102.3 million, represented 10 percent of the $1 billion in oil royalties paid to the Federal Government in 1988 (tables 2 and 30). This is up from the RIK crude royalty value of $93.7 million in 1987 that equaled 7 percent of all oil royalties paid to the Government in that year (table 30). The 1988 figures, however, remain well below RIK royalty values in 1984-85. The sustained decline in interest in the RIK program is associated with the worldwide reduction in petroleum prices and the attendant availability of low-priced crude oil on the open market.

Table 30.--Summary of Royalty-In-Kind oil taken as royalty payments for Federal mineral lease production, 1976-88

	ONSHORE RIK OIL		OFFSHORE RIK OIL		TOTAL RIK	
	Barrels Sold	Royalty Value	Barrels Sold	Royalty Value	Barrels Sold	Royalty Value
1976-83	74,208,450	$1,133,539,042	176,748,476	$2,799,545,638	250,956,926	$3,933,084,680
1984	7,750,000	217,132,000	19,170,000	575,115,000	26,920,000	792,247,000
1985	4,498,065	115,855,987	5,967,887	156,212,497	10,465,952	272,068,484
1986	1,528,842	21,385,284	1,432,418	19,023,331	2,961,260	40,408,615
1987	4,820,893	82,969,264	920,306	10,780,105	5,741,199	93,749,369
1988	6,928,986	94,314,227	861,027	7,951,951	7,790,013	102,266,178
1976-88	99,735,236	$1,665,195,804	205,100,114	$3,568,628,522	304,835,350	$5,233,824,326

Oil and gas refinery. (Photo courtesy Amoco Corporation.)

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LEASE MANAGEMENT

There were 24,693 producing and producible Federal and Indian oil and gas leases as of December 31, 1988. This represents a reduction of 6,280 leases, or 20.3 percent, over a comparable figure of 30,973 leases in 1987. The majority of the reduction occurred on Federal onshore lands where the number of producing leases fell 5,861 leases, or 23.9 percent, between the end of 1987 and the end of 1988. The amount of acreage under production or capable of production on Federal onshore lands declined 29.2 percent, from 15.5 million acres in 1987 to 11 million acres in 1988. There were 470 fewer producing or producible Indian oil and gas leases at the end of 1988. Indian oil and gas acreage declined from 1,625,772 acres in 1987 to 1,600,469 acres in 1988. There were 51 additional producing or producible leases on the Outer Continental Shelf (OCS) at the end of 1988. The amount of acreage in production or capable of production on the OCS increased by 3.7 percent, from 7.4 million acres in 1987 to nearly 7.7 million acres in 1988 (table 31).

The number of producing Federal and Indian coal leases declined from 128 leases at the end of 1987 to 126 leases at the end of 1988. The number of acres in coal production on Federal lands rose 4.9 percent, or 10,586 acres, from 1987 to 1988. The number of acres in coal production on Indian lands fell 20.4 percent, or 40,000 acres from 195,918 acres in 1987 to 155,918 acres in 1988 (table 32).

The number of other onshore producing mineral leases on Federal and Indian lands increased 27.6 percent, from 134 leases at the end of 1987 to 171 leases at the end of 1988. There were 26 more producing leases on Federal lands at the end of 1988 on 32,946 additional acres. Significant increases were recorded involving geothermal leases in California and Nevada; phosphate leases in Idaho; and potash leases in New Mexico. There were 11 more producing leases on Indian lands at the end of 1988 on 1,329 additional acres. The increase was primarily attributed to new phosphate leases in Idaho and new chat leases in Oklahoma (table 33).

There were 92,976 mineral leases, licenses, permits, and applications on Federal and Indian lands administered by the Department of the Interior at the end of 1988. This included 90,524 oil and gas actions and 2,452 coal and other minerals actions (table 35).

Petroleum engineer analyzes core samples.
(Photo courtesy Phillips Petroleum Co.)

Table 31.--Producing and producible Federal and Indian oil & gas leases onshore in 29 States and offshore in 4 OCS areas, as of December 31, 1988

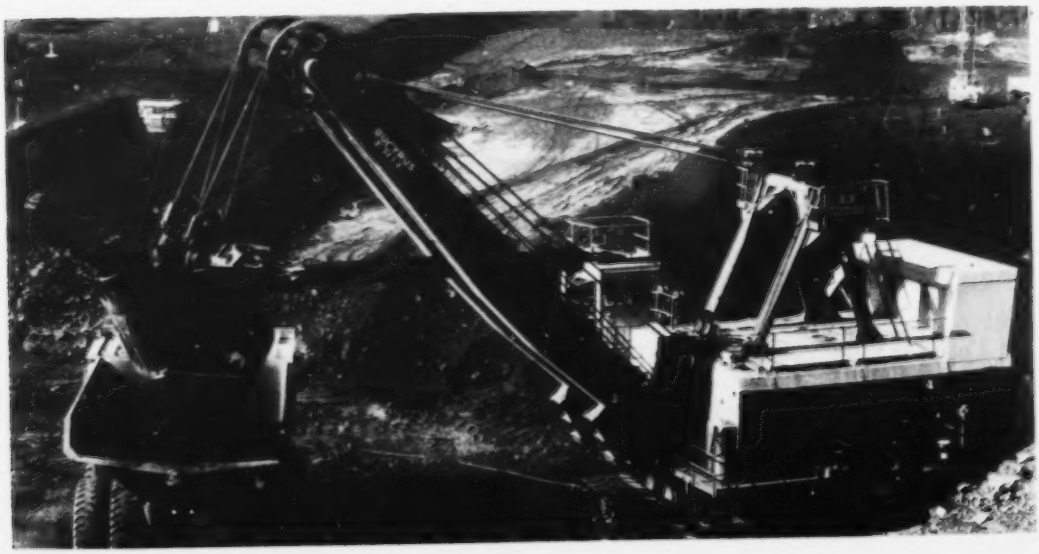
	INDIAN		FEDERAL		TOTAL ONSHORE	
	No.	Acres	No.	Acres	No.	Acres
Alabama	---	---	15	7,152	15	7,152
Alaska	1	2,560	34	61,578	35	64,138
Arizona	11	18,131	---	---	11	18,131
Arkansas	---	---	166	87,109	166	87,109
California	---	---	355	85,841	355	85,841
Colorado	138	436,106	1,894	1,426,422	2,032	1,862,528
Florida	---	---	3	5,778	3	5,778
Illinois	---	---	1	351	1	351
Kansas	---	---	401	114,066	401	114,066
Kentucky	---	---	40	20,568	40	20,568
Louisiana	---	---	177	63,161	177	63,161
Maryland	---	---	4	37,731	4	37,731
Michigan	3	63	35	65,847	38	65,910
Mississippi	---	---	123	55,712	123	55,712
Missouri	---	---	1	1,329	1	1,329
Montana	468	118,590	1,322	807,171	1,790	925,761
Nebraska	---	---	27	38,629	27	38,629
Nevada	---	---	52	22,307	52	22,307
New Mexico	468	505,243	5,660	3,638,263	6,128	4,143,506
New York	---	---	1	158	1	158
North Dakota	30	6,209	473	355,627	503	361,836
Ohio	---	---	51	7,883	51	7,883
Oklahoma	2,326	203,796	759	118,447	3,085	322,243
Pennsylvania	---	---	60	9,596	60	9,596
South Dakota	2	399	71	56,879	73	57,278
Texas	---	---	134	65,017	134	65,017
Utah	788	246,103	1,045	792,675	1,833	1,038,778
West Virginia	---	---	121	124,810	121	124,810
Wyoming	114	63,269	5,672	2,921,539	5,786	2,984,808
Subtotal			18,697	10,991,646	23,046	12,592,115
TOTAL	4,349	1,600,469				

	FEDERAL		TOTAL OFFSHORE	
	No.	Acres	No.	Acres
Atlantic OCS Area	8	34,913	8	34,913
California OCS Area	47	242,670	47	242,670
Gulf of Mexico OCS Area				
Central OCS Planning Area	1,300	5,867,671	1,300	5,867,671
Western OCS Planning Area	292	1,546,710	292	1,546,710
Subtotal	1,647	7,691,964	1,647	7,691,964
TOTAL	20,344	18,683,610	24,693	20,284,079

NOTE: Geothermal lease information is included in this table.

Table 32.--Producing Federal and Indian coal leases onshore in 10 States, as of December 31, 1988

	FEDERAL		INDIAN		TOTAL	
	No.	Acres	No.	Acres	No.	Acres
Arizona	---	---	3	64,858	3	64,858
Colorado	27	32,742	---	---	27	32,742
Kentucky	2	1,286	---	---	2	1,286
Montana	12	30,031	1	14,746	13	44,777
New Mexico	6	11,354	3	76,314	9	87,668
North Dakota	7	7,848	---	---	7	7,848
Oklahoma	2	2,228	---	---	2	2,228
Utah	30	35,717	---	---	30	35,717
Washington	1	241	---	---	1	241
Wyoming	32	103,132	---	---	32	103,132
TOTAL	119	224,579	7	155,918	126	380,497



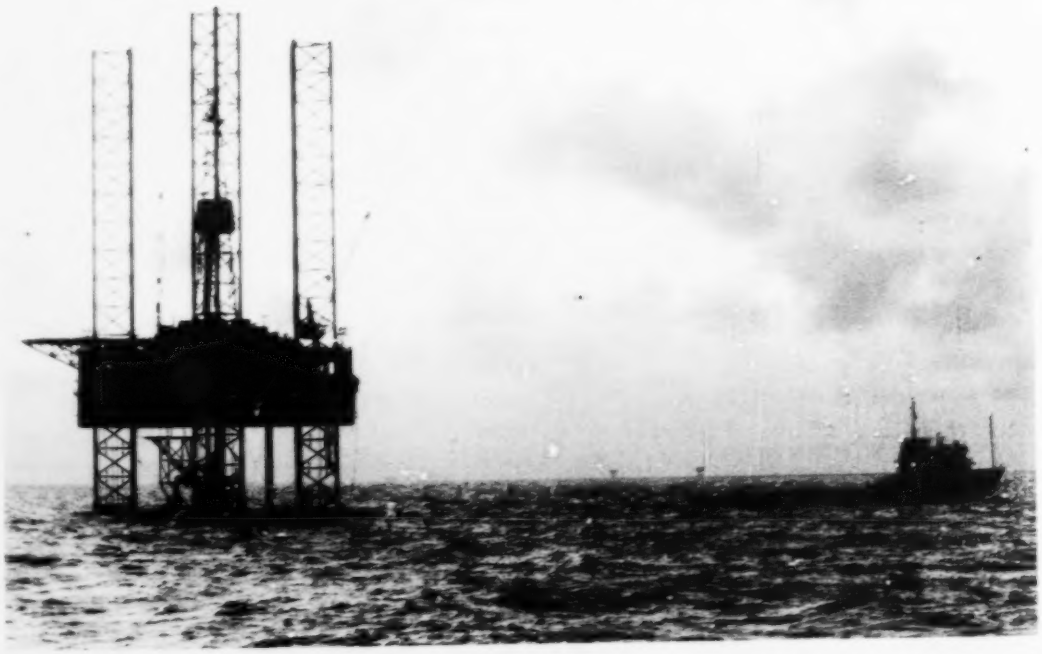
Coal mining operation, Wyoming. (Photo courtesy AMAX Coal Company.)

Table 33.--Producing Federal and Indian leases of other minerals onshore in 16 States, as of December 31, 1988

	FEDERAL		INDIAN		TOTAL	
	No.	Acres	No.	Acres	No.	Acres
ARIZONA						
Copper	---	---	3	6,734	3	6,734
Sand-Gravel	---	---	9	397	9	397
Sand-Silica	---	---	1	640	1	640
ARKANSAS						
Quartz Crystals	8	517	---	---	8	517
CALIFORNIA						
Geothermal	16	15,406	---	---	16	15,406
Sand-Gravel	---	---	2	1,289	2	1,289
Sodium	3	19,990	---	---	3	19,990
FLORIDA						
Clay	1	90	---	---	1	90
GEORGIA						
Amethyst	1	218	---	---	1	218
IDAHO						
Garnet Sands	1	40	---	---	1	40
Phosphate	5	5,352	11	3,856	16	9,208
MINNESOTA						
Iron Ore	1	160	---	---	1	160
MISSOURI						
Lead/Zinc	7	24,289	---	---	7	24,289
MONTANA						
Phosphate	5	1,983	---	---	5	1,983
NEVADA						
Geothermal	13	24,857	---	---	13	24,857
Sand-Gravel	2	1,100	1	100	3	1,200
NEW MEXICO						
Gypsum	---	---	1	15	1	15
Potash	25	42,363	---	---	25	42,363
Sand-Gravel	---	---	5	1,105	5	1,105
Sodium	9	12,317	---	---	9	12,317
OKLAHOMA						
Chat	---	---	5	585	5	585
Limestone	---	---	1	18	1	18
Sand-Gravel	---	---	3	4,483	3	4,483
UTAH						
Geothermal	6	11,558	---	---	6	11,558
Potash	10	24,700	---	---	10	24,700
VIRGINIA						
Limestone	1	355	---	---	1	355
WASHINGTON						
Sand-Gravel	---	---	1	45	1	45
WYOMING						
Bentonite	1	160	---	---	1	160
Soda Ash	12	23,554	---	---	12	23,554
Sodium	1	1,933	---	---	1	1,933
TOTAL	128	210,942	43	19,267	171	230,209

Table 34.--Summary by area of oil & gas and other mineral leases, licenses, and permits under the supervision of the Department of the Interior on the OCS, as of December 31, 1988

	FEDERAL LEASES OFFSHORE					
	OIL & GAS		OTHER		TOTAL OFFSHORE	
	No.	Acres	No.	Acres	No.	Acres
ALASKA	1,000	5,495,059	---	---	1,000	5,495,059
ATLANTIC STATES	74	421,296	---	---	74	421,296
CALIFORNIA	135	700,200	---	---	135	700,200
GULF OF MEXICO						
Eastern	175	1,061,283	---	---	175	1,061,283
Central	3,217	15,584,057	17	148,774	3,234	15,732,831
Western	1,200	6,173,082	---	---	1,200	6,173,082
TOTAL	5,801	29,434,977	17	148,774	5,818	29,583,751



Offshore drilling platform, Gulf of Mexico. (Photo courtesy Phillips Petroleum Co.)

Table 35.--Summary of oil & gas and other mineral leases, licenses, permits, and applications under the supervision of the Department of the Interior on Federal and Indian onshore lands, as of December 31, 1988

	OIL & GAS SUPERVISION ONSHORE						TOTAL OIL & GAS SUPERVISION ONSHORE	
	PUBLIC		ACQUIRED		INDIAN			
	No.	Acres	No.	Acres	No.	Acres	No.	Acres
Alabama	171	23,985	136	132,108	---	---	307	156,093
Alaska	6,774	2,370,019	---	---	1	2,560	6,775	2,372,579
Arizona	297	780,217	16	25,629	11	18,131	324	823,977
Arkansas	208	135,171	483	358,017	---	---	691	493,188
California	1,467	984,422	73	64,845	---	---	1,540	1,049,268
Colorado	7,453	7,964,910	497	296,956	162	436,106	8,112	8,697,972
Florida	40	7,725	118	247,707	342	189,358	500	444,790
Georgia	---	---	3	4,474	---	---	3	4,474
Idaho	330	906,999	4	2,500	---	---	334	909,499
Illinois	---	---	6	750	---	---	6	750
Iowa	---	---	3	460	---	---	3	460
Kansas	355	93,919	46	20,147	---	---	401	114,066
Kentucky	---	---	75	52,657	---	---	75	52,657
Louisiana	270	27,013	318	180,877	---	---	588	207,890
Maryland	---	---	10	37,731	---	---	10	37,731
Michigan	110	61,515	665	388,843	3	63	778	450,421
Minnesota	---	---	66	17,146	---	---	66	17,146
Mississippi	162	16,859	1,186	673,936	23	5,301	1,371	696,096
Missouri	---	---	7	1,713	---	---	7	1,713
Montana	5,809	6,383,307	880	808,858	2,075	734,966	8,764	7,927,131
Nebraska	98	20,398	58	45,278	---	---	156	65,676
Nevada	2,724	6,800,590	2	1,032	---	---	2,726	6,801,622
New Mexico	11,240	8,968,520	109	78,839	689	674,343	12,038	9,721,702
New York	---	---	7	8,669	---	---	7	8,669
North Carolina	---	---	6	8,596	---	---	6	8,596
North Dakota	619	234,100	897	640,942	591	233,647	2,107	1,108,689
Ohio	1	60	86	23,672	---	---	87	23,732
Oklahoma	853	122,573	580	266,200	3,780	396,277	5,213	785,050
Oregon	387	861,652	10	10,596	---	---	397	872,248
Pennsylvania	---	---	60	9,596	---	---	60	9,596
South Carolina	---	---	11	19,851	---	---	11	19,851
South Dakota	439	636,026	118	104,604	79	16,641	636	757,271
Tennessee	---	---	27	49,307	---	---	27	49,307
Texas	---	---	388	245,796	---	---	388	245,796
Utah	6,110	6,606,898	53	21,795	1,477	461,674	7,640	7,090,367
Virginia	---	---	125	231,880	---	---	125	231,880
Washington	320	356,340	194	354,121	---	---	514	710,461
West Virginia	---	---	209	287,945	---	---	209	287,945
Wisconsin	8	1,583	75	93,990	---	---	83	95,573
Wyoming	26,519	16,564,018	457	128,853	463	278,927	27,439	16,971,798
TOTAL	72,764	60,928,819	8,064	5,946,917	9,696	3,447,994	90,524	70,323,730

SOURCE: Data from Bureau of Land Management and Minerals Management Service records.

Table 35.--Summary of oil & gas and other mineral leases, licenses, permits, and applications under the supervision of the Department of the Interior on Federal and Indian onshore lands, as of December 31, 1988 (cont.)

OTHER MINERALS SUPERVISION ONSHORE						TOTAL "OTHER" SUPERVISION ONSHORE		TOTAL FLUID & SOLID MINERALS UNDER SUPERVISION ONSHORE		
PUBLIC		ACQUIRED		INDIAN						
No.	Acres	No.	Acres	No.	Acres	No.	Acres	No.	Acres	
16	13,146	3	1,240	---	---	19	14,386	326	170,479	Alabama
4	8,280	---	---	---	---	4	8,280	6,779	2,380,859	Alaska
5	5,618	---	---	50	76,586	55	82,204	379	906,181	Arizona
---	---	20	2,937	---	---	20	2,937	711	496,125	Arkansas
313	454,046	5	2,656	7	1,962	325	458,664	1,865	1,507,932	California
131	192,544	9	4,974	---	---	140	197,518	8,252	8,895,490	Colorado
7	1,003	4	425	---	---	11	1,428	511	446,218	Florida
---	---	2	364	---	---	2	364	5	4,838	Georgia
99	50,548	7	4,146	49	7,287	155	61,981	489	971,480	Idaho
---	---	10	4,343	---	---	10	4,343	16	5,093	Illinois
---	---	---	---	---	---	---	---	3	460	Iowa
---	---	---	---	---	---	---	---	401	114,066	Kansas
3	2,575	6	3,371	---	---	9	5,946	84	58,603	Kentucky
---	---	---	---	---	---	---	---	588	207,890	Louisiana
---	---	---	---	---	---	---	---	10	37,731	Maryland
---	---	5	1,067	---	---	5	1,067	783	451,488	Michigan
---	---	19	12,637	---	---	19	12,637	85	29,783	Minnesota
---	---	---	---	---	---	---	---	1,371	696,096	Mississippi
---	---	46	50,121	---	---	46	50,121	53	51,834	Missouri
58	76,943	1	4,757	2	14,806	61	96,506	8,825	8,023,637	Montana
---	---	6	10,926	---	---	6	10,926	162	76,602	Nebraska
257	438,951	---	---	1	560	258	439,511	2,984	7,241,133	Nevada
215	313,781	1	120	137	124,353	353	438,254	12,391	10,159,956	New Mexico
---	---	---	---	---	---	---	---	7	8,669	New York
---	---	2	461	---	---	2	461	8	9,057	North Carolina
15	12,047	1	10	---	---	16	12,057	2,123	1,120,746	North Dakota
---	---	---	---	---	---	---	---	87	23,732	Ohio
39	59,732	6	12,233	11	7,258	56	79,223	5,269	864,273	Oklahoma
232	411,694	1	538	---	---	233	412,232	630	1,284,480	Oregon
---	---	2	81	---	---	2	81	62	9,677	Pennsylvania
---	---	8	24,519	---	---	8	24,519	19	44,370	South Carolina
1	35	---	---	3	62	4	97	640	757,368	South Dakota
---	---	---	---	---	---	---	---	27	49,307	Tennessee
---	---	---	---	---	---	---	---	388	245,796	Texas
355	573,695	19	47,592	---	---	374	621,287	8,014	7,711,654	Utah
---	---	1	355	---	---	1	355	126	232,235	Virginia
2	521	---	---	15	1,971	17	2,492	531	712,953	Washington
---	---	---	---	---	---	---	---	209	287,945	West Virginia
---	---	31	12,164	---	---	31	12,164	114	107,737	Wisconsin
201	385,638	3	3,120	6	290	210	389,048	27,649	17,360,846	Wyoming
1,953	3,000,797	218	205,157	281	235,135	2,452	3,441,089	92,976	73,764,819	TOTAL

Table 36.--General Federal and Indian mineral lease terms under the Mineral Lands Leasing Act of February 25, 1920, as amended

OIL & GAS LEASES/FEDERAL OFFSHORE LANDS

	Customary Royalty Rate	Annual Rental & Other Fees	Duration of Lease	Size of Lease	Bonding Requirements
OCS Lease	12-1/2% and 16-2/3% on production. Net profit sharing or sliding scale from 12-1/2% to 65%, flat rates of 33-1/3% and above.	$3 per acre: $3 per acre minimum royalty after discovery; $10 per acre for drainage sales; $10 per acre minimum royalty for drainage sales.	5 years (not to exceed 10 years). Continued if capable of producing in commercial quantities.	5,000 acres unless a larger area is needed for a production unit.	Lease: $50,000. Area: $300,000.

OIL & GAS LEASES/FEDERAL ONSHORE LANDS

	Customary Royalty Rate	Annual Rental & Other Fees	Duration of Lease	Size of Lease	Bonding Requirements
Competitive Lease	Prior to 12-23-87: oil 12-1/2% to 25%, and gas 12-1/2% or 16-2/3%, depending on production per well per day for the calendar month. Leases after 12-22-87: flat rate of 12-1/2%.	Rental $1.50 and $2 per acre; $1 per acre minimum royalty after discovery. Leases after 12-22-87: minimum royalty cannot be less than rental requirement.	5 years; continued if capable of producing in commercial quantities.	640 acres or less.	Lease: $10,000. State: $25,000. Nationwide: $150,000.
Non-Competitive Lease	12-1/2% on production.	Rental $.50, or $1 per acre. $2 per acre if later classified as a known geologic structure. Leases after 12-22-87: $2 per acre for 6-10 years for simultaneous leasing; $1 per acre minimum royalty after discovery; $75 filing fee per lease. Minimum royalty cannot be less than rental requirement.	10 years; continued if capable of producing in commercial quantities.	10,240 acres maximum within 6-mile square, or 640 acres minimum.	Lease: $10,000. State: $25,000. Nationwide: $150,000.

Table 36.--General Federal and Indian mineral lease terms under the Mineral Lands Leasing Act of February 25, 1920, as amended (cont.)

OIL & GAS LEASES/FEDERAL ONSHORE LANDS (cont.)

	Customary Royalty Rate	Annual Rental & Other Fees	Duration of Lease	Size of Lease	Bonding Requirements
National Petroleum Reserve in Alaska Lease (Subject to Appropriation Act of 1981)	Not set by law--now 16-2/3%.	$3 per acre.	10 years or less.	Up to 60,000 acres.	Corporate Surety--$100,000.

OIL & GAS LEASES/INDIAN LANDS

	Customary Royalty Rate	Annual Rental & Other Fees	Duration of Lease	Size of Lease	Bonding Requirements
Indian Lease	Varied. Generally, new leases provide for 20% or more on production. Older leases are generally 12-1/2% or 16-2/3%.	Varied. Amounts range from $1.25 per acre to $30 per acre. Rents may or may not be recoupable against royalties.	Generally the primary term is 5 years or less.	Varied. Range from fraction of an acre to over 200,000 acres.	Lease: $500 to $2,000 depending on acreage. Nationwide: $75,000.

COAL LEASE/FEDERAL LANDS

	Customary Royalty Rate	Annual Rental & Other Fees	Duration of Lease	Size of Lease	Bonding Requirements
Lease Sold Before August 4, 1976	$.155 ton underground; $.175 ton surface mines.	$1 per acre credited against royalty payments for the lease year; minimum royalty payments per lease terms.	Indefinite period with 20-year readjustments.	Not more than 46,080 acres in one State & no more than 100,000 acres in U.S. for one or more leases.	Nonproducing leases: $5,000 or amount equal to annual rent rounded to $1,000, whichever is greater. Producing leases: 3 months' production royalty.

Table 36.--General Federal and Indian mineral lease terms under the Mineral Lands Leasing Act of February 25, 1920, as amended (cont.)

COAL LEASE/FEDERAL LANDS (cont.)

	Customary Royalty Rate	Annual Rental & Other Fees	Duration of Lease	Size of Lease	Bonding Requirements
Lease Sold After August 3, 1976	Readjusted & new leases: 8% of value underground; 12-1/2% of value at surface.	$3 per acre not credited against royalty payments. $250 lease filing fee. $50 transfer fee.	20 years; continued if producing in commercial quantities, subject to readjustment every 10 years.	Not more than 46,080 acres in one State & no more than 100,000 acres in U.S. for one or more leases.	Nonproducing leases: $5,000 or amount equal to annual rent rounded to $1,000, whichever is greater. Producing leases: 3 months' production royalty.

COAL LEASE/INDIAN LANDS

	Customary Royalty Rate	Annual Rental & Other Fees	Duration of Lease	Size of Lease	Bonding Requirements
Indian Lease	Varies according to lease terms and amendments. Generally 6% to 12%.	Varied. Average rental rate per acre is $2. Advance royalty payable up to $1 million annually.	Varies by lease terms.	Varied. Limited acreage to over 40,000 acres.	Lease: $500 to $2,000, depending on acreage. State: $75,000 depending on acreage. Nationwide: $75,000 or as determined by the Secretary.

OTHER MINERAL LEASES/FEDERAL LANDS

	Customary Royalty Rate	Annual Rental & Other Fees	Duration of Lease	Size of Lease	Bonding Requirements
Geothermal Lease	10% to 15% of value of steam & not less than 5% of value of demineralized water; "by-products" royalty rate determined by particular mineral as specified in the Geothermal Steam Act, 1970 30 U.S.C. 1001-1025.	$1 per acre; $2 per acre in known geothermal resources area.	10 years; continued if capable of producing in commercial quantities.	2,560 acres & not less than 640 acres unless for nonelectrical uses.	Lease: $10,000. State: $50,000. Nationwide: $150,000. $5,000 minimum for protection of surface owner.

Table 36.--General Federal and Indian mineral lease terms under the Mineral Lands Leasing Act of February 25, 1920, as amended (cont.)

OTHER MINERAL LEASES/FEDERAL LANDS (cont.)

	Customary Royalty Rate	Annual Rental & Other Fees	Duration of Lease	Size of Lease	Bonding Requirements
Gilsonite Lease	Per lease terms.	$.50 credited against royalties. $3 per acre minimum royalty payable in advance beginning year 6, credited against production royalties.	20 years, subject to readjustment every 20 years.	Per lease terms.	Not less than $5,000.
Lead, Zinc, or Iron Lease & Other Solid & Hardrock Minerals	Average 5% of value.	$1 per acre credited against royalties. $3 per acre minimum royalty payable in advance beginning year 6, credited against production royalties.	20 years with right for renewal every 10 years thereafter.	2,560 acres.	Not less than $5,000.
Oil Shale Lease	Per lease terms.	$.50 per acre. Minimum royalty per lease terms.	Per lease terms.	Per lease terms.	Per lease terms.
Potassium, Sodium, or Phospahte Lease	Average 5% of value.	$.25 first year; $.50 years 2-5; $1 per acre beginning year 6, credited against royalties. $3 per acre minimum royalty payable in advance beginning year 6, credited against production royalties.	Indefinite, subject to readjustment every 20 years.	2,560 acres.	Lease: Not less than $5,000. State: $25,000. Nationwide: $75,000
Sulfur Lease	Not less than 5% of value.	$.50 per acre credited against royalties. $3 per acre minimum royalty payable in advance beginning year 6, credited against production royalties.	20 years, with right for renewal every 10 years thereafter.	640 acres.	Not less than $5,000.

Table 36.--General Federal and Indian mineral lease terms under the Mineral Lands Leasing Act of February 25, 1920, as amended (cont.)

	OTHER MINERAL LEASES/INDIAN LANDS				
	Customary Royalty Rate	Annual Rental & Other Fees	Duration of Lease	Size of Lease	Bonding Requirements
Copper, Gold Lead, Silver, Tungsten, Zinc and Other Ores and Metals	Varies by commodity and lease terms. Ranges from $.29 per unit to $.75 per unit and from 10% to 22-1/2%.	Varies from $1 per acre to $5 per acre. Flat amount of rental or advance royalty due regardless of lease size. Can range from $2,000 to $1.2 million annually.	Varies by lease from 1 year to 20 years.	1 acre to 40,000 acres.	Lease: As Determined. State: $15,000. Nationwide: $75,000.

NOTE: Lease terms may be extended or modified for various reasons as authorized by regulation. A $10 fee is required to file, transfer, or assign an Indian lease. A comparable fee is required to file, transfer, or assign certain other lease commodities.

Systems Management Division employees in the RMP headquarters develop, maintain, and operate RMP automated systems.

GLOSSARY

AFS --- Auditing and Financial System. A computerized system operated by the Minerals Management Service for the collection and disbursement of royalties and rents from producing leases on Federal and Indian lands.

Allocation of Receipts --- Determination of revenues to be paid to funds, counties, States, or Indian Tribes from receipts collected during the fiscal year as required by law.

Application --- A formal request for rights to public lands or resources or for the eventual title to those lands or resources.

Assistant Secretary --- Assistant Secretary - Land and Minerals Management. Serves under the Secretary of the Interior. Exercises secretarial direction and supervision over the Bureau of Land Management, the Minerals Management Service, and the Office of Surface Mining Reclamation and Enforcement.

Barrel/bbl --- A measure of volume for petroleum products. One barrel is equivalent to 42 U.S. gallons or .15899 cubic metres. One cubic metre equals 6.2897 barrels.

BIA --- Bureau of Indian Affairs. A Federal Agency within the Department of the Interior responsible for facilitating the full development of the human and natural resource potential of Indian and Alaskan native people to manage their own affairs under a trust relationship with the Federal Government.

BLM --- Bureau of Land Management. A Federal Agency within the Department of the Interior that administers public lands and natural resources. Bureau programs provide for the protection, orderly development, and use of the public lands and resources under principles of multiple use and sustained yield.

Bonus --- The cash consideration paid to the United States by the successful bidder for a mineral lease. The payment is made in addition to the rent and royalty obligations specified in the lease.

BRASS --- Bonus and Rental Accounting Support System. A computerized system operated by the Minerals Management Service for the collection and disbursement of rents and bonuses for nonproducing leases on Federal lands.

Committee --- BIA/BLM/MMS Tripartite Committee. A forum established by the Department of the Interior to resolve issues of mutual concern that affect the three Bureaus responsible for administering Federal and Indian lease and royalty management programs.

Competitive Leasing --- Leases are issued by the United States where there are known mineral deposits or where inference of probable mineralization may be derived from knowledge of the geology of the land. The lands are offered for lease by competitive bidding following publication of the offer of the lands for lease. The lease is issued to the highest bidder at a sale by public auction. (See also noncompetitive leasing).

Department --- Department of the Interior. A cabinet-level Department in the Executive Branch of the Federal Government responsible for the administration of most of the nationally owned public lands and natural resources. The Department is further responsible for American Indian reservation communities and for individuals who live in Island Territories under U.S. administration.

Effective Date --- The date a lease or assignment becomes effective. For a lease, the first day of the month after the issue date or, upon applicant request, the first day of the month of issuance. For an assignment, the first day of the month after proper filing of all required documents.

EOP --- Explanation of Payment. A series of reports mailed twice monthly to Indians and allottees, and monthly to States addressing the source and nature of mineral revenue disbursements.

Federal Land --- All classes of land owned by the Federal Government, including public, acquired, and military lands.

FOGRMA --- Federal Oil and Gas Royalty Management Act of 1982. Public Law 97-451, enacted by Congress and signed into law by the President to ensure that all oil and gas originating from Federal and Indian lands and on the Outer Continental Shelf are properly accounted for under the direction of the Secretary of the Interior.

FY --- Fiscal Year. A period of time used for accounting purposes. The Federal Government recognizes a fiscal year that extends from October 1 of one year to September 30 of the following year.

Indian Allotment --- An allocation of a parcel of public lands or Indian reservation lands to an Indian for individual use. Revenue from mineral production may vest with the individual Indian allottee.

Indian Lease Audit Strategy --- A program developed by the Minerals Management Service and the Bureau of Indian Affairs to address the audit requirements of Indian Tribes and allottees.

Lease --- A legal document executed between a land owner, as lessor, and a company or individual, as lessee, that conveys the right to exploit the premises for minerals or other products.

License --- An authority granted by the United States to perform a particular act or series of acts upon public lands without the licensee possessing any estate or interest in the land itself.

Mcf --- Thousand cubic feet.

Mineral --- A naturally occurring organic or inorganic homogeneous substance with characteristics and economic uses that bring it within the purview of mineral laws. A substance that may be obtained under applicable laws from public lands by purchase, lease, or preemptive entry.

Mineral Permit --- A permit that authorizes prospecting for certain leasable minerals on public lands described in the permit.

Minimum Royalty --- A payment made annually on a per-acre basis to validate a lease in lieu of drilling.

MMcf --- Million cubic feet.

MMbd --- Million barrels per day.

MMS --- Minerals Management Service. A Federal Agency within the Department of the Interior that administers the Royalty Management Program and the Offshore Minerals Management Program. The Royalty Management Program is responsible for the accurate and timely determination, collection, and distribution of royalties from Federal and Indian lands and bonuses and rents from Federal Lands. The Offshore Minerals Management Program is responsible for offshore leasing and associated functions.

Noncompetitive Leasing --- Leases issued to qualified applicants for land not specifically known or presumed to contain mineral or petroleum deposits in quantity. (See also competitive leasing).

OCS --- Outer Continental Shelf. All submerged lands lying seaward and outside of the area of lands beneath navigable waters. Lands beneath navigable waters are interpreted as extending from the coastline more than 3 nautical miles into the Atlantic Ocean, the Pacific Ocean, and the Gulf of Mexico excluding the coastal waters off Texas and western Florida. Lands beneath navigable waters are interpreted as extending from the coastline more than 3 marine leagues into the Gulf of Mexico off Texas and western Florida.

OEA --- Office of External Affairs. A staff element within the Minerals Management Service, responsible for conducting an outreach program to ensure Royalty Management Program coordination and continuing communication with Indian allottees, Tribes, States, other Federal Agencies, and industry.

Offshore Minerals Management Program --- See Minerals Management Service.

PAAS --- Production Accounting and Auditing System. An integrated system of both automated and manual applications operated by the Minerals Management Service to collect production and other operational data and to ensure that royalties are paid on 100 percent of reported production.

Petroleum --- Oil or gas obtained from the rocks of the earth by drilling down into a reservoir rock and piping the minerals to the surface.

RCD --- Royalty Compliance Division. A division of the Minerals Management Service responsible for coordinating and conducting audits of industry royalty reporting and payments practices for mineral leases on Federal and Indian lands.

Rent --- The amount paid on a periodic basis by the holder of a lease in payment for the right to use the land or resources for purposes established in the lease.

Report Month --- The month in which production, sales, or royalty reports from lessees are received by the Minerals Management Service.

RIK --- Royalty-in-Kind. Under the Mineral Lands Leasing Act of 1920 and the Outer Continental Shelf Lands Act of 1953, the Federal Government, as lessor, may take part or all of its oil and gas royalties "in kind," or in a volume of the commodity, as opposed to "in value" (cash). The Government sells the commodity at fair-market value to eligible refiners who do not have access to an adequate supply of crude oil at equitable prices.

RMAC --- The Secretary of the Interior's Royalty Management Advisory Committee. The Committee, composed of representatives from States, Tribes, and the minerals industry, addresses significant Royalty Management Program issues, and provides advice to the Secretary of the Interior on matters that concern participants in the royalty management process.

RMP --- Royalty Management Program. See Minerals Management Service.

Royalty --- Payment, in money or kind, of a stated share of production from mineral deposits by the lessee to the lessor. Royalty may be an established minimum, a sliding-scale, or a step-scale. A step-scale royalty rate increases by steps as the average production increases. A sliding-scale royalty rate is based on average production and applies to all production

Secretary --- Secretary of the U.S. Department of the Interior.

STATSS --- State and Tribal Support System. An automated information retrieval system operated by the Minerals Management Service to provide States, Tribes, and the Bureau of Indian Affairs with access to Auditing and Financial System data.

Windfall Profit --- The excess of the removal price of a barrel of crude oil over the sum of the adjusted base price of the barrel and the severance tax adjustment for the barrel.

WPT --- Windfall Profit Tax. An excise tax on a windfall profit from taxable crude oil removed from the premises after February 29, 1980. The tax applies only to production from wells in the United States or in U.S. possessions. The tax was repealed by Congress on August 23, 1988.

APPENDIX

1988 Table Conversion Chart

Tables in the 1988 Report have been renumbered to accommodate the relocation of selected tables. The table numbers in the 1988 Report and the corresponding table numbers in the 1987 Report are provided for the convenience of our readers.

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As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interest of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. Administration.